jaycar

CELEBRATING 40 YEARS IN ELECTRONICS

1981-2021

2021/22 Engineering and Scientific Catalogue

7000+ Products - 420+ New Products - 572 Pages

jaycar.com.au

TRIBUTE TO OUR FOUNDER – GARY JOHNSTON

Gary Johnston, who passed away after a short illness on 10th March 2021, lived by the old adage that if you do what you love you'll never work a day in your life. That life began in an extremely modest house in the western suburbs of Sydney where he frequented the Concord tip to scavenge discarded parts from AWA and Phillips. As a teen he built amplifiers whose quality belied the origins of their construction. His passion for hobbyist electronics begun at an early age.

Working for Philips and CEMA brought him to the attention of a young Dick Smith. In 1975 Gary started working side by side with Dick and eventually rose to the role of Marketing Manager for Dick Smith Electronics. Upon selling DSE to Woolworths in 1980 it was Dick who left an advertisement on Gary's desk for a business that was for sale in the Sydney CBD, John Carr and Co. Gary bought that business in 1981, changed the name to Jaycar, and began to transform a single showroom into Jaycar Electronics. At the time of Gary's death in March 2021 the Jaycar Group included over 150 stores across Australia and New Zealand.

The success of Jaycar allowed Gary to indulge in a wide array of projects from racing his 1965 Valiant around the Australian Outback in several charity 'Variety Club Bashes', to buying an ex- Czechoslovakian Airforce Mig-21 fighter and more recently supporting Team Warby with David Warby's push to break the World water speed record currently held by his father Ken.

His most recent passion and perhaps his most significant was his creation of 'Submarines for Australia', an effort to lobby the Australian Government to scrap its planned $90billion+ project to acquire French Nuclear Submarines and retro fit them with diesel engines and to embrace nuclear power. In an amazing coincidence Gary's lobbying efforts were realised when on 16th September 2021, his birthday, it was announced that the Australian Government would purchase 8 Nuclear Submarines using top of the line US technology. Gary would have been proud beyond belief to have seen his efforts culminate in this announcement.

Gary is survived by his loving wife Kerry, children Chris, Tim, Jeni and Robbie and 6 grandchildren. We all miss him terribly but could not be more proud of the man who started life in a 2-bedroom cottage in Mortlake to rise to one of the most successful businessmen in Australia. A self-made man the likes of whom they don't make anymore.

The Johnston Family

Index:

Workbench Equipment A8

3D Printing	A11
Crimpers	A38
Digital Multimeters	A54
Digital Scales	A80

Projects & Learning A83

Arduino® Compatible Products	A83
Green Power	A127
Kits & Projects	A130
Microscopes	A126
Raspberry Pi & Accessories	A90

Electromechanical A144

ABS Enclosures	A178
Buzzers	A169
Fans	A172
Plastic Enclosures	A177
Toroidals	A183

Components A186

Capacitors	A206
Integrated Circuits (ICs)	A194
Light Emitting Diodes (LEDs)	A187
Resistors	A213
Transistors & Diodes	A200

Cable & Connectors A223

2.5, 3.5, 6.5mm Audio	A233
Anderson® Type Connectors	A256
Crimp Lugs	A253
DC Power Cable	A224
Solar Cable	A225

See opposite end of catalogue for Power, Lifestyle, Sight & Sound, Security & Surveillance, IT & Communications.

Cards & Programmes	A5
How to Order	A267
Index	A269
Jaycar Authorised Resellers	B290
New Products	A6
Order Form	A267
Terms & Conditions	A268

3D Printers & Filament	A8
AC Adaptors	B55
Aerosols	A30
Arduino® Boards & Modules	A83
Audio Video Leads	B166
AV Senders	B143
Batteries	B15
Battery Chargers - High Capacity	B38
Bluetooth® Audio	B132
Buzzers / Acoustic Alarms	A169
Cable Ties	A264
Capacitors	A206
Car Dash Cams	B233
Car Reversing Cameras	B236
Cat 5/6 Leads	B250
CB Radios	B273
CCTV Cameras	B202
Computer Leads	B253
Connectors	A231
Cordless Phones	B269
Digital Multimeters	A54
Digital Video Recorders & Kits	B207
Diodes	A202
Enclosures	A178
Fans	A172
Fuses	A150
HDMI Leads & Switches	B148
Heatshrink	A260
Heatsinks	A170
ICs	A194
Inverters	B26
Jump Starters	B84
Kids Learning Kits	A127
Kits - Electronic	A129
LEDs	A186
M.2 Drives	B264
Magnifiers	A49
Mechatronics	A114
Networking	B245
Nuts & Screws	A265
PA Equipment & Party Lighting	B187
Panel Meters	A81
Plug Packs	B55
Plugs & Sockets	A231
Potentiometers	A215
Power Banks	B49
Powerboards	B45
Power Supplies - Lab	B60
Portable Fridge/Freezers	B5
Raspberry Pi	A88
Relays	A140
Resin Printer	A8
Resistors	A213
Solar Panels - Fixed	B30
Solar Panels - Portable	B30
Solder	A28
Soldering Irons / Stations	A20
Switches	A158
Tools	A38
Torches	B110
Transceivers - UHF & VHF	B273
Transformers	A183
Transistors	A200
TV Antennas	B172
USB Leads & Chargers	B267
Weather Stations	A73
Wire & Cable	A224

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Visit your local Jaycar store.

With over 120 stores in Australia and New Zealand our network of retail stores continues to grow. Come and visit us at one of these locations - see our website or the back of our catalogue for full address, phone and trading hours details. Our friendly, experienced staff look forward to showing you our extensive range of products.

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click & collect

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Products with this icon are not stocked in all stores but are easily special ordered in-store or online.

A video providing more information is available on our website and our YouTube channel.

More information, specs, drivers, or manuals for this product are available on our website.

This product includes some components that you have to build or assemble yourself.

Learn more with our vast range of books. Look out for this book icon or see our index on page 543.

We've permanently dropped the price on this product - we're passing on those savings to you.

NEW

This is a brand new product for the Jaycar 2021/22 Catalogue. We're excited to bring it into our range!

1 YEAR LIMITED WARRANTY

These icons indicate the Warranty of a product, or if located on the top right hand corner of a page, the Warranty for all the products on that page. Warranty only covers faults in manufacture, unless stated otherwise.

Raspberry Pi Compatible

Arduino® Compatible

COMPATABILITY ICONS:
To assist you in selecting compatible products for your preferred microcontroller, we have created two icons. They should help you select appropriate modules and hardware. If in doubt, ask our friendly team.

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think retro. TO WIN

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trade card jaycar

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www.jaycar.com.au/tradecards

New Products

We have added many great new products this year. Here are some of them!

NEW

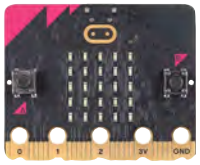
ANYCUBIC LARGE 4K MONO PHOTON RESIN 3D PRINTER
TL4421, PAGE A9

VOXELAB 3D FILAMENT PRINTER
TL4432, PAGE A17

NEW RANGE OF ESUN FILAMENTS & RESINS
PAGE A17

INSPECTION CAMERA WITH 4.3" LCD AND RECORD/SNAPSHOT FUNCTION
QC8718, PAGE A53

SMART WI-FI MULTI-CHANNEL WEATHER STATION WITH COLOUR LCD SCREEN
XC0438, PAGE A74



BBC MICRO:BIT V2 GO DEVELOPMENT BOARD BUNDLE
XC4324, PAGE A112

RASPBERRY PI 4B 8GB SINGLE BOARD COMPUTER
XC9104, PAGE A88

ARDUINO® STARTER KIT
XC9200, PAGE A83

RASPBERRY PI 400 KEYBOARD DESKTOP COMPUTER
XC9115, PAGE A88

13-IN-1 USB TYPE-C HUB
XC5907, PAGE B256

PODCAST PRODUCTION STUDIO
AM4224, PAGE B185

8K HDMI V2.1 CABLES
WQ7920, PAGE B148

15L FRIDGE WITH BATTERY
GH2027, PAGE B6

20,000MAH POWER BANK WITH WIRELESS CHARGER
MB3822, PAGE B43

12.8V 100AH LITHIUM SLIMLINE DEEP CYCLE BATTERY WITH METAL CASE
SB2220, PAGE B16

12VDC CONTROL BOX
HB8520, PAGE B19

PANEL MOUNT ANDERSON® 50A CONNECTORS
PT4476, PAGE B25

300W MULTI-FUNCTION PORTABLE POWER CENTRE WITH PURE SINE WAVE INVERTER
MB3767, PAGE B51

12V 1000A JUMP STARTER & POWERBANK WITH 10W WIRELESS QI CHARGER
MB3766, PAGE B85

HARDCORE ELECTRONICS

CABLES AND CONNECTORS	A223
COMPONENTS	A186
ELECTROMECHANICAL	A144
PROJECTS AND LEARNING	A83
WORKBENCH EQUIPMENT	A8

THE TEST OF TIME

Since the very first Jaycar catalogue in 1981, we have scoured the globe for the best tools and hardware for all sorts of electronics projects.

While our range has certainly evolved as technology has, there are some items which were great then, and they're great now.

CMOS ICs, PCB hardware, plugs and sockets, are just a handful of our products which have stood the test of time and have been ranged for 40yrs.

While we continue to look for innovations to bring you the latest products too, we thoroughly enjoy seeing these items which are in effect timeless. They're often still as versatile as they were 40yrs ago, even if the project you're building is very different.

40YRS OF HARDCORE ELECTRONICS

WORKBENCH EQUIPMENT

Resin 3D Printers

SOLDERING & SERVICE:

Adhesives & Tape	A32
Aerosols	A30
Anti-static Product	A41
Gas Torches	A27
Magnifiers	A50
PCB Prototypes	A141
Solder & Accessories	A28
Soldering Irons	A23
Soldering Stations	A20
Stands & Safety	A29

TEST & MEASUREMENT:

Automotive Testers	A77
Clamp Meters	A63
Digital Multimeters	A54
Digital Scales	A80
Digital Thermometers	A68
Inspection Cameras	A53
Light Meters	A71
Oscilloscopes	A64
Panel Meters	A82
Sound Level Meters	A72
Specialist Meters	A62

TOOLS & CASES:

3D Filament	A17
3D Pen	A15
3D Printers	A11
3D Scanner	A15
Cable Tools	A40
Cutters & Pliers	A35
Crimpers	A38
Drill Accessories	A45
Electric Screwdrivers	A43
Resin Printers	A8
Screwdrivers	A44
Tool Boxes / Cases	A52
Ultrasonic Cleaners	A71
Watchmaker Tools	A49

LIQUID RESIN MAKES FOR MUCH HIGHER RESOLUTION 3D MODELS. THE LATEST IN 3D PRINTING TECHNOLOGY

ANYCUBIC Mono UV Photon Resin 3D Printer

NEW

Create highly detailed 3D prints with this Photon Mono resin printer by Anycubic. Unlike filament (FDM) type 3D printers, this resin printer uses UV light that passes through its high resolution LCD screen to cure the resin layer by layer where it is needed. This method produces a much more detailed and smooth print with less visible print layers. The Photon Mono features a 6" monochrome 2K LCD for detailed prints up to 130mm long by 80mm wide. The two high quality Z-axis rails provide build heights up to 165mm high with layer resolutions between 0.01 and 0.15mm. Thanks to the monochrome LCD, exposure times are reduced to just 1.5 seconds per layer so you can achieve print speeds up to 55mm per hour. The monochrome screen also provides up to 2000 hours of print time, which is four times longer than colour LCDs. To operate the printer, simply use the Anycubic slicer software to prepare and save the model to the supplied USB thumb drive, which you insert into the USB port on the printer. Use the 2.8" touchscreen to operate and monitor your printer's progress. The Anycubic slicer software supports up to 16 times anti-aliasing, with fast slicing, hallowing, split model, and text paste features. Other features include quick FEP replacement, UV-blocking top cover, matrix parallel light for uniform exposure, and top cover detection that stops the printing if the cover is removed.

Resin in multiple colours is sold separately.

- 6" 2K Mono LCD
- Quick FEP Replacement
- Fast Printing Speed
- High Quality Z-axis

Ideal for fine detail compared to filament 3D Printers

ANYCUBIC

Specifications	TL4422
Layer Thickness	0.01mm - 0.15mm
XY Res	0.051mm 2560 x 1620 (2K)
Z Axis Res	0.01mm
Printing Speed	50mm/hr max.
Material	405nm UV Resin
System	ANYCUBIC Photon Mono
Operation	2.8 inch Touch Screen
Software	ANYCUBIC Photon workshop
Connectivity	USB / Wi-Fi
Technology	LCD-based SLA
Light Source	High-quality filament (wavelength 405nm)
Build Volume	165(H) x 130(L) x 80(W)mm
Dimensions	383(H) x 227(D) x 222(W)mm

	Cat.	Qty 1+
2K Resin 3D Printer	TL4422	$499.00

RESIN 3D PRINTERS CONTINUED

ANYCUBIC 4K Mono X UV Photon Resin 3D Printer

4K High Resolution for highly detailed prints

NEW

The 4K Mono X printer takes resin-based 3D printing to the next level. Using a 4K resolution 8.9" monochrome LCD this unit produces a higher quality, more detailed printed model with improved accuracy and in a faster print time than previous models. The larger size allows a larger build volume and bigger models.

Unlike filament (FDM) type 3D printers, this resin printer uses UV light that passes through its 4K high resolution LCD screen to cure the resin layer by layer where it is needed. Compared to FDM this method produces a more detailed and smooth print with less visible print layers.

The Photon Mono allows detailed prints up to 192mm long by 120mm wide. The two high quality Z-axis rails provide build heights up to 245mm high with layer resolutions between 0.01 and 0.15mm. Thanks to the monochrome LCD, exposure times are reduced to just 1.5 seconds per layer so you can achieve print speeds of up to 60mm per hour. The monochrome screen also provides up to 2000 hours of print time, which is four times longer than colour LCDs.

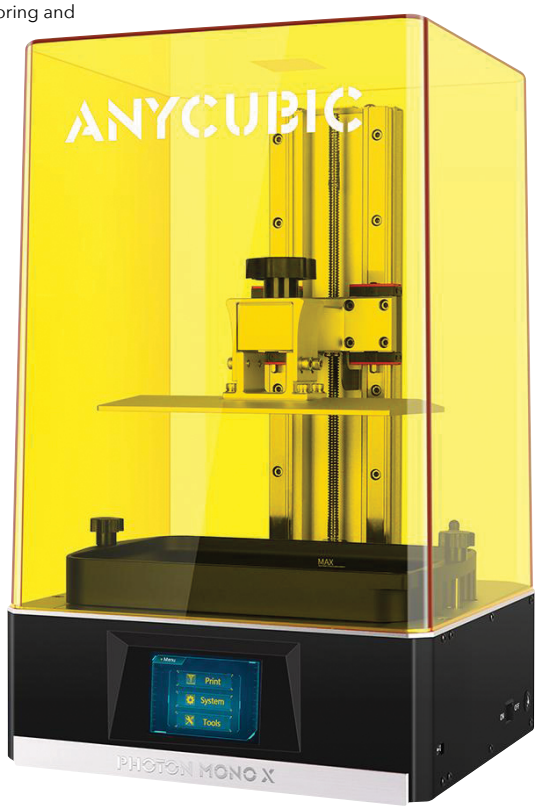
To operate the printer, simply use the Anycubic slicer software to prepare and save the model to the supplied USB thumb drive, which you insert into the USB port on the printer. Use the 3.5" touchscreen to operate and monitor your printer's progress.

The Anycubic slicer software supports up to 16 times anti-aliasing (smoothing), with fast slicing, hallowing, split model, and text paste features. The mobile app allows remote monitoring and management of print jobs

Other features include quick FEP replacement, UV-blocking top cover, matrix parallel light for uniform exposure, and top cover detection that stops the printing if the cover is removed.

Resin in multiple colours is sold separately.

- 8.9" 4K Monochrome LCD
- Quick FEP Replacement
- Fast Printing Speed
- High Quality Z-axis



ANYCUBIC

Specifications	TL4421
Layer Thickness	0.01mm - 0.15mm
XY Res	0.050mm 3840 x 2400 (4K)
Z Axis Res	0.01mm
Printing Speed	60mm/hr max.
Material	405nm UV Resin
System	ANYCUBIC Photon Mono X
Operation	3.5 inch Touch Screen
Software	ANYCUBIC Photon workshop
Connectivity	USB / Wi-Fi
Technology	LCD-based SLA
Light Source	High-quality filament (405nm)
Build Volume	245(H) x 192(L) x 120(W)mm
Dimensions	475(H) x 270(D) x 290(W)mm
Weight	10.75kg

	Cat.	Qty 1+
4K Resin 3D Printer	TL4421	$1,149.00

RESIN WASH AND CURE MACHINES

Wash and Cure Machines for Resin 3D Prints

The ANYCUBIC wash and cure machine comes with built in 405nm UV light set, rotatable curing platform with full 360° curing operation, auto pause function when user lifts the the top cover and a wash function which allows you to use a wash solution and wash away any excess solution from your print.

Two models to choose from.

NEW

TL4424 TL4423

ANYCUBIC

Specifications	TL4424	TL4423
Control Method	Digital tube, LED indicator, Control knob	Digital tube, LED indicator, Control knob
Rated Power	25W	25W
UV Lights	405nm	405nm
Time Selection	1-60min	1-60min
Machine Size	365(H) x 225(L) x 235(W)mm	479(H) x 290(L) x 270(W)mm
Basket Washing Size	165(H) x 120(L) x 74(W)mm	290(H) x 192(L) x 120(W)mm
Hanging Cleaning Size	235(H) x 192(L) x 120(W)mm	235(H) x 192(L) x120(W)mm
Curing Size	165(H) x 140(D)mm	245(H) x 190(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Wash and Cure 2.0	TL4424	$249.00	$219.00	$199.00
Wash and Cure Plus	TL4423	$499.00	$449.00	$399.00

RESIN FOR 3D PRINTERS

ESUN 3D PRINTER RESIN

A range of resins from market leader eSun, made specifically for LCD/LED light source printers.

- **Optimised for both colour and mono printers**
- **Suitable for large and small printers**

eSUN Standard Resin 1kg

eSun-Standard Resin is a good general purpose resin with high hardness.

- High hardness & rigidity
- Good moulding accuracy
- Easy to print thin-walled part
- Smooth printing surface

eSUN — Medium density

1kg	Cat.	Qty 1+	Qty 3+	Qty 6+
Red	TL4443	$69.95	$62.95	$55.95
Yellow	TL4444	$69.95	$62.95	$55.95
White	TL4445	$69.95	$62.95	$55.95
Black	TL4446	$69.95	$62.95	$55.95
Gray	TL4447	$69.95	$62.95	$55.95
Sky Blue	TL4448	$69.95	$62.95	$55.95
Clear	TL4449	$69.95	$62.95	$55.95

eSUN PLA Resin 1kg

eSun-PLA is a Bio-Based PLA Resin designed to be cleaned with a resin wash.

- Low smell
- High precision
- Smooth surface
- Can be and drilled
- EN71-3 certified, safe for kids to use, making model toys, etc.

eSUN — High precision

1kg	Cat.	Qty 1+	Qty 3+	Qty 6+
Red	TL4433	$59.95	$53.95	$47.95
Yellow	TL4434	$59.95	$53.95	$47.95
White	TL4435	$59.95	$53.95	$47.95
Black	TL4436	$59.95	$53.95	$47.95
Gray	TL4437	$59.95	$53.95	$47.95
Blue	TL4438	$59.95	$53.95	$47.95
Clear	TL4439	$59.95	$53.95	$47.95

eSUN PLA Pro Resin 1kg

eSun-PLA is a Bio-Based PLA Resin which has excellent resolution, well suited to the production of props and models that require a higher level of detail.

- Higher resolution & precision
- High strength & toughness (balanced performance)
- EN71-3 certified, safe for kids to use, making model toys, etc.

eSUN — Excellent resolution

1kg	Cat.	Qty 1+	Qty 3+	Qty 6+
Gray	TL4440	$59.95	$53.95	$47.95
Black	TL4441	$59.95	$53.95	$47.95
White	TL4442	$59.95	$53.95	$47.95

Specifications	Standard	PLA	PLA Pro	Water Washable
Wavelength (nm)	395-405	395-405	355-405	395-405
Density (g/m3)	1.08-1.13	1.07-1.10	1.09-1.10	1.10-1.14
Viscosity (25°, MPa.s)	170-200	100-270	200-300	110-180
Hardness (Shore D)	78-82	75-82	78-80	74-82
Tensile Strength (Mpa)	46-67	24-55	37-48	19-46
Elongation at Break (%)	28-36	24-37	25-28	17-30
Flexural Strength (Mpa)	46-72	25-61	36-49	15-50
Cat no.	TL4443-TL4449	TL4433-TL4439	TL4440-TL4442	TL4450-TL4453

eSUN Water Washable Resin 500g

eSun-Washable Resin offers the ability to wash your print model clean after printing using plain water. This is a time and money saving feature you will love. Remember to dispose of the wash water safely! (See tech talk)

- Water washable
- High precision
- Low viscosity
- High release rate
- Balanced strength, durability and rigidity

eSUN — Water washable

500g	Cat.	Qty 1+
White	TL4450	$39.95
Clear	TL4451	$39.95
Black	TL4452	$39.95
Gray	TL4453	$39.95

Resin for ANYCUBIC 3D UV Resin Printers

Anycubic resins are designed to optimise the performance of low light source LCD based printers. This resin ensures maximum strength and minimal shrinkage as well as achieving fastest print speed. Shortened curing time adds to the performance enhancements brining premium print jobs to life in the shortest time. As well as fast and accurate printing this resin minimises release forces and adhesion so that the model attached to the forming platform can be easily removed. Low viscosity makes for easier cleaning of both printer and model.

- 500ml bottle
- 405nm UV wavelength

ANYCUBIC

500ml	Cat.	Qty 1+	Qty 3+	Qty 6+
Black	TL4425	$39.95	$35.95	$31.95
Grey	TL4426	$39.95	$35.95	$31.95
Clear	TL4427	$39.95	$35.95	$31.95
Blue	TL4428	$39.95	$35.95	$31.95
Green	TL4429	$39.95	$35.95	$31.95

Tech talk

HANDLING RESIN

When handling uncured resin, it's highly recommended to wear protective gloves. Our IPA (NA1066) can be used to clean uncured resin off your machine & desktop, but should never be used to clean skin.

DISPOSING OF WATER WASHABLE RESIN

After rinsing printed models with water, the water picks up particles of the resin. The safest way to dispose of this is to let the rinse water sit in a tray in the sun. The resin will solidify allowing the water to be filtered and the solids captured. Once captured they can be dispose of in the same way you would waste plastic.

3D Filament Printers

pick me 3D PRINTERS

	AQUILA EASY TL4432	CREALITY CR-X TL4410	FLASHFORGE ADVENTURE 3 TL4256	FLASHFORGE ADVENTURE 4 TL4431	FLASHFORGE GUIDER IIS TL4239	FLASHFORGE CREATOR III TL4258	DOBOT TRIPLE FILAMENT TL4412	SNAPMAKER 3-IN-1 TL4400
NUMBER OF EXTRUDERS	1	2	1	1	1	2	3	1
HEATED BED	✓	✓	✓	✓	✓	✓	✓	✓
REMOVEABLE BED	✓	✓	✓	✓		✓		
BUILD VOLUME (LxWxHmm)	220x220x250	300x300x400	150x150x150	200x220x250	280x250x300	300x250x200	100x100x100	125x125x125
FRAME STYLE	OPEN	OPEN	ENCLOSED	ENCLOSED	ENCLOSED	ENCLOSED	OPEN	OPEN/ ENCLOSED
FILAMENT TYPE	ABS, PLA and others	ABS, PLA, Soluble, Exotic	ABS, PLA	ABS, PLA, and others	ABS, PLA, and others	ABS, PLA, and others	ABS, PLA	ABS, PLA
FILAMENT SIZE (MAX.)	1.75mm	1.75mm	1.75mm	1.75mm	1.75mm	1.75mm	1.75mm	1.75mm
LAYER RESOLUTION	0.2mm	0.1 - 0.5mm	0.1 - 0.4mm	0.1 - 0.4mm	0.1 - 0.5mm	0.05 - 0.4mm	0.05 - 0.3mm	0.05 - 0.3mm
MAX PRINT SPEED	100mm/s	120mm/s	100mm/s	150mm/s	100mm/s	150mm/s	100mm/s	120mm/s
CNC CARVING								●
LASER ENGRAVING								●
TOUCH SCREEN		●	●	●	●	●	●	●
PAGE	A12	A12	A13	A13	A14	A14	A15	A15
PRICE	$499.00	$1,299.00	$899.00	$1,299.00	$2,499.00	$3,899.00	$699.00	$1,349.00

All prices are in Australian Dollars

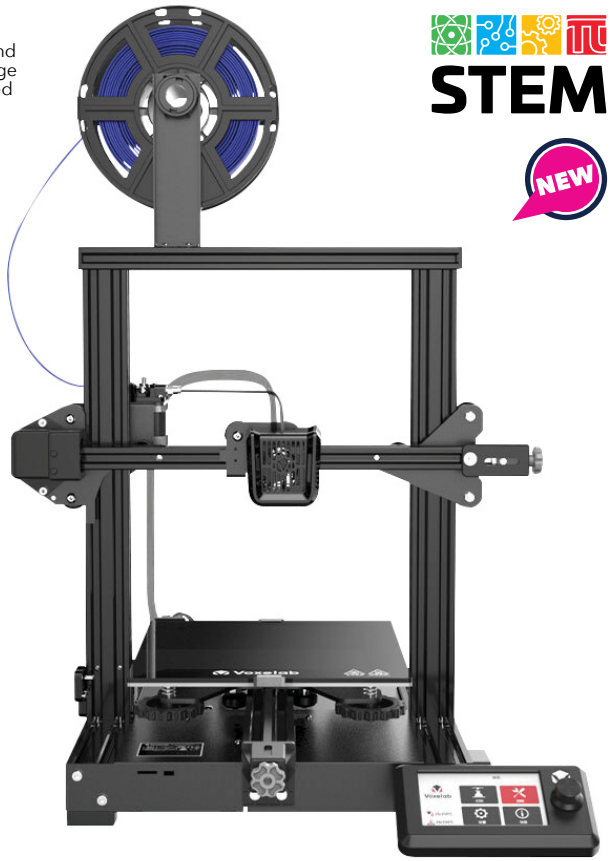
For next day delivery, or Click and Collect, see page A4

3D PRINTERS CONTINUED

Aquila Easy DIY 3D Printer with Large Print Area

The Voxelab Aquila DIY 3D printer is the perfect printer for beginners, hobbyists and tinkerers. With a large build volume of 220 x 220 x 250mm, it can achieve quiet large print projects. This printer operates at high end with the many features it has packed in its amazing price bracket. The Aquila is the perfect 3d printer for makers with a limited budget.

- Large build volume 220x220x250mm
- Resume printing
- Out-of-box assembled
- Aluminum body
- Filament auto feeding
- Flexible print bed
- 4.3" colour screen
- Filament supported PLA, ABS, PETG and Voxelab PLA Pro Filament.



STEM

NEW

220(L) x 250(H) x 220(W)mm | Open | PLA/ ABS/PETG | 1.75mm | 0.2mm | 100mm/s

Specifications	TL4432
Build Volume	220(L) x 220(W) x 250(H)mm
Maximum Print Speed	100 mm/s
Filament	1.75mm PLA/ABS/PETG
Platform	Glass
Layer Resolution	0.2mm
Dimensions	480(W) x 475(L) x 473(H)mm

	Cat.	Qty 1+	Qty 3+
Aquila Easy DIY 3D Printer	TL4432	$499.00	$449.00

Creality 3D Printer CR-X Dual Filament

Featuring a new print head design that channels two filament feeds through a single nozzle, the CR-X is the first dual extruder 3D printer from Creality. Two spool holders mounted atop the CR-X feed into two extruders, which are situated on both ends of the X-axis rail. From here, the two filaments pass through PTFE tubes into a single Y-splitter feeding into the CR-X's hot end, before extrusion through a single 0.4mm nozzle.

- 4.3" colour LCD touchscreen
- Over-sized bed screws for leveling the print bed
- Carboloy silicon printing platform
- 0.4mm nozzle aperture
- Dual cooling fans
- SD memory card slot
- Heavy duty power 24VDC supply

300(L) x 400(H) x 300(W)mm | Open | 2 | 1.75mm | 0.1 - 0.5mm | 120mm/s

Specifications	TL4410
Build Volume	300(L) x 300(W) x 400(H)mm
Maximum Print Speed	120 mm/s
Filament	ABS/PLA
Filament Diameter	1.75 mm
Interface	microSD
Dimensions	400 x 650 x 550mm, Weight: 12kg
Extruders	Dual extruder, dual filament
Layer Resolution	0.1-0.5mm
Layer Thickness	+/- 0.2 mm
Nozzle Diameter	0.4 mm
Extruder Temperature	220°C
Bed Temperature	120°C
Screen	4.3" Colour Touch

	Cat.	Qty 1+	Qty 3+	Qty 6+
Creality Dual Filament 3D Printer	TL4410	$1,299.00		
Replacement Nozzle	TL4216	$4.95	$4.45	$3.95
Teflon Tube	TL4217	$4.95	$4.45	$3.95
Pipe Joint	TL4218	$4.95	$4.45	$3.95

CREALITY

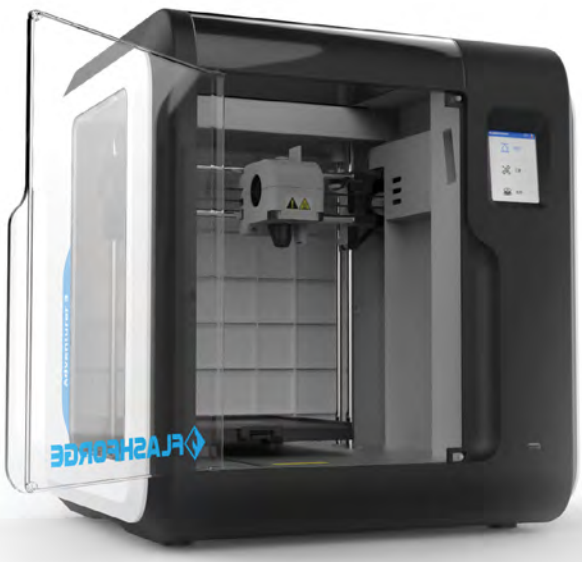
STEM

3D PRINTERS CONTINUED

Flashforge Adventurer 3 3D Printer with Cloud Print Management

The Adventurer 3 3D Printer is the new generation desktop 3D printer from Flashforge. It features a removable print bed, cloud print, detachable nozzle, and built-in camera, which is perfect as a teaching tool and great for domestic or commercial use. Detachable nozzle: remove nozzle just in one clip; stainless steel tube material, fast heating up to 200°C in 50 seconds. Features 3D Cloud, an integral 3D printing resource platform - Get free storagespace (register online), backup and share files, interact with other users, automatically slice print files, free model database.

- Lightweight and compact design
- Auto filament feeding with an enclosed built-in filament cartridge
- Removable and flexible heated print bed
- 45dB, ultra-quiet during operation
- Built-in 2MP HD camera for remote monitoring
- Full-colour touch-screen with simple UI interface design
- Online management - transfer, monitor, and manage multiple printers effortlessly



150(L) x 150(H) x 150(W)mm | Enclosed | ABS/PLA | 1.75mm | 0.1 - 0.4mm | 100mm/s

Specifications	TL4256
Build Volume	150(L) x 150(H) x 150(W)mm
Layer Resolution	0.1 - 0.4mm
Nozzle Diameter	0.4mm
Max. Print Bed Temperature	100°C
Extruder Quantity	Single
Frame & Body	ABS/PC
Software	FlashPrint
Connectivity	USB Stick/Wi-Fi/Ethernet/Cloud Printing

	Cat.	Qty 1+
Flashforge Adventurer 3	TL4256	$899.00

Flashforge Adventurer 4 3D Printer with Air Filter

The Adventurer 4 offers a number of benefits. A larger size means larger builds and the optional 265°C nozzle means exotic filaments are no problem.

The levelling free platform minimises set-up time and the 110°C platform with magnetic build plate and double holder spring plate simplify the removal of models.

Resume printing after a power failure, HD camera and app based remote control enhance 24/7 management of your print jobs. The package is rounder out with a 1kg spool capacity and HEPA 13 filter.

This is a well-priced larger capacity unit.

- Multiple nozzle extruder options
- Quick-release nozzle design
- Filament detection
- Magnetic flexible build platform
- 4.3" touchscreen
- Resume printing
- Remote printing control by Wi-Fi or Ethernet.
- Supports ABS, PLA, PC, PETG, PLA-CF, PETG-CF materials.
- Cloud printing
- Built-in-camera
- HEPA13 air filter
- Energy-saving mode

Built-in HEPA13 air filter

250x220x200mm | Enclosed | ABS/PLA | 1.75mm | 0.1 - 0.4mm | 150mm/s

Specifications	TL4431
Build Volume	220(W) x 200(D) x 250(H)mm
Maximum Print Speed	150 mm/s
Layer Resolution	0.1 - 0.4mm
Nozzle Diameter	0.4mm
Max. Nozzle Temperature	240°C
Bed Temperature	110°C
Extruder Quantity	Single
Dimensions	540(H) x 500(L) x 470(W)mm

	Cat.	Qty 1+
Flashforge Adventurer 4	TL4431	$1,299.00

3D PRINTERS CONTINUED

Flashforge Guider IIS Extra Large 3D Printer

The Flashforge Guider IIs has an upgraded extruder which can be heated up to 300°, and a max print speed of 100mm/s. It gives you access to print with a wide varity of PLA, PVA and advanced filament such as PETG, TPU, ABS, Nylon, HIPS, PA, PC, wood, electrically conductive materials, flexible material. The Guider IIs' platform can print at a max dimension of 280 x 250 x 300mm 3D models, meaning you can print large whole 3d model or print multiple parts at the same time. The unit is enclosed in a sturdy 38kg full-metal frame which its design allows the print head to move steadily & quietly, ensuring consistent 3d printing every time. The bed auto-leveling system ensures the platform is level before the print. The extruder then adjusts the minor distance between the print nozzle and platform to create a uniform and smooth build surface, which highly improves the platform adhesion and print quality.

- 300°C patent extruder & 120°C heatable build bed
- Open filament system & filament detection
- Resumes printing from power failure
- 5" touchscreen
- Cloud printing
- Built-in camera
- Air filter

STEM

NEW

Wi-Fi

280(W) x 250(D) x 300(H)mm | Closed | 1 | 1.75mm | 0.1 - 0.4mm | 100mm/s

Specifications	TL4239
Maximum Print Size	280(W) x 250(D) x 300(H)mm
Maximum Print Speed	100 mm/s
Filament	PLA / ABS / PETG / HIPS / PC / ASA
Filament Diameter	1.75
Interface	USB cable, USB stick, Wi-Fi, Ethernet FlashCloud, PolarCloud
Extruders	1
Extruder Temperature	300°C
Cameras	1
Layer Resolution	0.1-0.4mm
Layer Thickness	- + 0.2mm
Nozzle Diameter	1.75
Bed Temperature	120°C
Screen	5 inch touch screen
Dimensions	550(L) x 490(W) x 570(H)mm

	Cat.	Qty 1+
Flashforge Guider IIS	TL4239	$2,499.00

FLASHFORGE

Flashforge Creator III V2 Dual Extruder 3D Printer

With two extruders the Flashforge Creator 3 V2 you can print multiple ways, independent dual extruder, Mirror Mode and Copy mode. Double efficiency of the mirror printing, the Creator 3 makes it come true where more complicated prints that can be printed with dual extrusion and water-soluble filament. Make the impossible possible and achieve the expected printing effect.

- 300°C Integrated nozzle
- Intelligent Bed Leveling
- Spring Sheet Print Plate
- Built-In Camera
- 4.5" Touch Screen
- Built-In Filament Spools

STEM

NEW

Wi-Fi

300(L) x 250(W) x 200(H)mm | Two Filament | Enclosed | ABS/PLA | 1.75mm | 0.05-0.3mm | 150mm/s

Specifications	TL4258
Build Volume	300(L) x 250(W) x 200(H)mm
Maximum Print Speed	10-150 mm/s
Filament	PLA/ABS/PC/PVA/HIPS/PETG/W.P.C./Nylon
Filament Diameter	1.75 mm
Interface	USB stick/WiFi/Ethernet/3D Cloud
Extruders	2
Layer Resolution	0.05-0.4mm
Layer Thickness	+/- 0.2 mm
Nozzle Diameter	0.4 mm
Extruder Temperature	300°C
Bed Temperature	120°C adjustable
Screen	4.5" Colour Touchscreen
Dimensions	1935(H) x 1918(L) x 1605(W)mm, Weight: 23.6kg

FLASHFORGE

	Cat.	Qty 1+
Flashforge Creator III V2	TL4258	$3,899.00

DOBOT Triple Filament 3D Printer MOOZ-3Z

The newly introduced modular colour-mixing 3D printer MOOZ-3Z features a delta structure and high printing efficiency. Equipped with a three-colour print head, you can easily create mixed colour printing artworks via the controller, by setting different feeding speed and printing time of the three differently-coloured raw filaments. Two schemes of colour-mixing in CMY colour mode are available to 3D print the desired colour pattern. Quick assembly, easy-to-use controller and app, rich printing colour pattern make MOOZ-3Z suitable for beginners, DIYers, educators and artists. It's time to say goodbye to monotonous single-colour printing and welcome more beautiful and colourful 3D printing models.

3-in 1-out Mix Colour Print Head that Prints at Fast Speed and High Efficiency

Born for colour-mixing 3D printing, MOOZ-3Z shows super high efficiency and incredible fidelity. By using merely one 0.4mm nozzle, it provides you with very smooth and lifelike results. The 3-in-1 out mix colour print head not only gives a rich mixture of colour combination to the printed objects, but also brings forth high efficiency and ultra-fast printing speeds. Different colours will blend together perfectly so that you create multi-colour objects without encountering any trouble.

100(L) x 100(H) x 100(W)mm | Triple Filament | Open | ABS/PLA | 1.75mm | 0.05-0.3mm | 100mm/s

Specifications	TL4412
Build Volume	100 x 100 x 100 mm
Layer Resolution	0.05 - 0.3mm
Nozzle Diameter	0.4mm
Max. Print Bed Temp.	100°C
Extruder Quantity	Triple
Frame & Body	Aircraft Grade Aluminium
Materials	1.75mm PLA, ABS
Connectivity	Wi-Fi, SD Card, USB

Colour mixing technology

	Cat.	Qty 1+
DOBOT Triple Filament 3D Printer	TL4412	$699.00

Snapmaker 3-in-1 Printer with 3D Printing/Laser Etching/ CNC Carving Interchanging Modules

The Snapmaker 3-in-1 3D Printer isn't just limited to 3D printing. The extruder nozzle can be swapped out with the included laser engraver or the CNC carver. With its integrated modular design and connectors, you can transform this printer with ease as well as expand it with future upgrades. The 3.5" touchscreen gives you added control of your printer. The all-metal design of this printer is durable and provides a solid frame.

3D Printing Print 3D models as precise as 50 microns in a 4.9 x 4.9 x 4.9" build area using 1.75mm ABS and PLA filaments. Print from the USB Type-A port using .obj and .stl file types. The print bed is heated.

Laser Engraving With a 4.9 x 4.9" work area, the laser is 200 mW with a wavelength of 405 nm and is Safety Class 3B. It works on wood, bamboo, leather, plastic, fabric, paper, non-transparent acrylic, and more. Please note that the laser cannot engrave on metal, glass, and other reflective surfaces. Upload supported file types, such as SVG, JPEG, and PNG, to the Snapmaker.

CNC Carving With a 3.175mm shank diameter running at up to 19,000 rpm, the CNC carving module has a 3.5 x 3.5 x 2.0" work area. It can work with wood, acrylic, PCB, carbon fibre sheets, jade, and more. Please note that metal, glass, and gem are not supported. SVG, STEP, IGES, IGS, DWG, DXF, and more are the supported file types. You may need to use a third-party application, like Autodesk Fusion 360.

125x125x125mm | Both | PLA/ABS | 1.75mm | 0.05 - 0.3mm | 120mm/s

Specifications	TL4400	Extruder Temp.	220°C
Build Volume	125 x 125 x 125 mm	Layer Resolution	0.05-0.3mm
Max. Print Speed	120 mm/s	Layer Thickness	+/- 0.2 mm
Filament	ABS, PLA	Nozzle Diameter	0.4 mm
Filament Diameter	1.75 mm	Bed Temp.	60°C
Interface	USB	Screen	3.5" Colour Touch
Dimensions	272 x 290 x 335mm, Weight: 9kg	CNC Carving size	90 x 90 x 50mm
Extruders	1	Laser Engraving size	125 x 125mm

	Cat.	Qty 1+
3-in-1 Printer	TL4400	$1,349.00
Enclosure for 3-in-1	TL4401	$249.00

3D PRINTING PEN

3D Printing Pen

Create amazing 3D artwork with this 3D printing pen. It is comfortable to hold, and easy to operate. You simply press the feed button with your thumb to start the filament flowing. It supports both 1.75mm ABS and PLA filament, and automatically recognises when you insert new filament. A USB lead and mains power adaptor are included for power, and the pen automatically turns off after 2 minutes of inactivity if you forget to turn it off. 3 stencils, a drawing pad, and 3 x 10m rolls of coloured PLA filament are supplied to get you started straight away. Recommended for ages 14+.

- ABS or PLA filament compatible
- 3 template stencils included
- Ergonomic shape for comfortable operation

Includes 1 x 3D Printing Pen, 3 x 10m Filament Rolls, Stand, USB Power Cable, USB to Mains Power Adaptor, 3 x Templates, and Drawing Pad

Specifications	TL4253
Filament Type	PLA,ABS
DC Plugpack Voltage	5VDC
DC Current Draw	2A
Filament Size	1.75mm
Dimensions	185(L) x 27(D) x 50(H)mm
Weight	62.0g
Nozzle Diameter	0.6mm
Max Nozzle Temp.	230°C

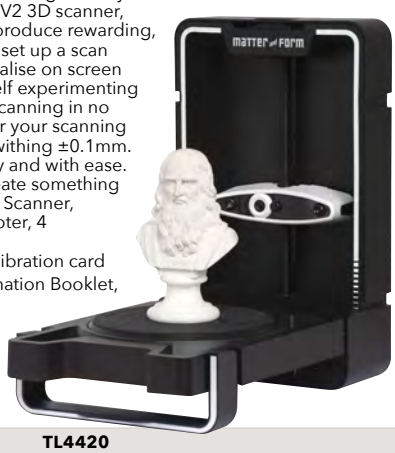
	Cat.	Qty 1+	Qty 3+	Qty 6+
3D Printing Pen	TL4253	$79.95	$71.95	$63.95
10 Piece Filament Pack	TL4255	$14.95	$13.45	$11.95

3D SCANNER

Desktop 3D Scanner V2 with Quickscan Software

The +Quickscan feature captures geometry in as fast as 65 seconds! Packaged together with the V2 3D scanner, MFStudio and +Quickscan produce rewarding, fast results that allow you to set up a scan and watch the object materialise on screen like magic. You'll find yourself experimenting and learning to master 3D scanning in no time. Enjoy total control over your scanning setup with a scan accuracy withing ±0.1mm. Achieve great results quickly and with ease. Become resourceful and create something spectacular! Includes V2 3D Scanner, USB B cable, AC Power adapter, 4 interchangeable worldwide power plugs, Calibration card User Manual, Product Information Booklet, Small Plastic Toy, MFStudio software with +Quickscan.

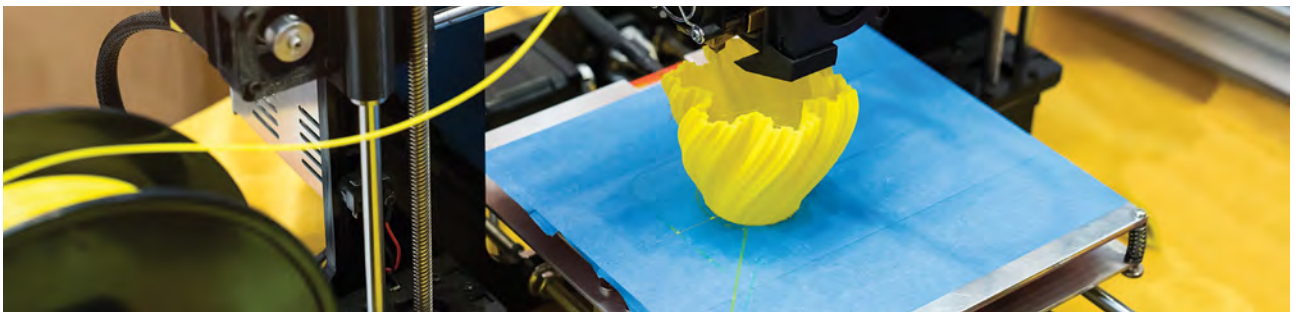
- Dimensions: 345(H) x 210(W) x 85(L)mm



Specifications	TL4420
Max Scan Height & Diameter	250(H) x 180(Dia.)mm
Interface	USB 2.0
Max Scan Weight	2.99kg
Sensors	HD CMOS Sensor with Two Lasers

	Cat.	Qty 1+
3D Scanner	TL4420	$1,499.00

3D PRINTING FILAMENT



pick me FILAMENT GUIDE

Over these pages you can see that Jaycar sells an extensive range of 3D printer filaments from standard PLA to exotic filaments, including conductive, flexible and glow-in-the-dark. If you're wondering which filament to purchase, looking to fine-tune your printer, or just curious to find out what options are available have a look at the table below. Our in-house boffins have tested our filaments under all sorts of conditions to work out exactly what the best settings are for printing. We've listed recommended bed and nozzle temperatures, and other suggestions to get the best out of your filament.

	Extruder Temp	Bed Temp	Notes:
PLA	200°C to 220°C	0°C to 70°C	Most common type of filament which compatible with all types of 3D printers. Bio-degradable and FDA food safety approved.
ESILK	190°C to 220°C	0°C to 80°C	Prints like PLA, with a transparent & high gloss finish.
PETG	230°C to 250°C	0°C to 80°C	Easy to print, stronger than PLA with low shrinkage. Not as resistant to heat & chemicals compared to ABS.
ABS	220°C to 260°C	90°C to 110°C	Able to withstand heat and stress without cracking or weakening, finished prints will hide blemishes & minor print issues. ABS is highly resistant to chemicals, making it a great base for gluing, sanding & painting.

3D PRINTER FILAMENT

1.75mm Flashforge PLA Filament

The best, most consistent and most tested PLA filament engineered and manufactured by Flashforge perfect for use with Flashforge's 3D printer range. Made with high quality PLA material to ensure smooth feeding and extrusion. All Flashforge filaments are tested to minimize the chance of jamming in the extruder. Use with confidence!

600g & 1kg rolls available

FLASHFORGE

Colour	Weight	Cat.	Qty 1+	Qty 3+	Qty 6+
Black	600g	TL4260	$24.95	$22.45	$19.95
Blue	600g	TL4261	$24.95	$22.45	$19.95
Green	600g	TL4262	$24.95	$22.45	$19.95
Red	600g	TL4263	$24.95	$22.45	$19.95
Clear	600g	TL4264	$24.95	$22.45	$19.95
Orange	600g	TL4265	$24.95	$22.45	$19.95
White	600g	TL4266	$24.95	$22.45	$19.95
Yellow	600g NEW	TL4267	$24.95		
Black	1kg	TL4270	$39.95	$35.95	$31.95
Blue	1kg	TL4271	$39.95	$35.95	$31.95
Green	1kg	TL4272	$39.95	$35.95	$31.95
Red	1kg	TL4273	$39.95	$35.95	$31.95
Clear	1kg	TL4274	$39.95	$35.95	$31.95
Orange	1kg	TL4275	$39.95	$35.95	$31.95
White	1kg	TL4276	$39.95	$35.95	$31.95
Yellow	1kg NEW	TL4269	$39.95	$35.95	$31.95

1.75mm ABS Black 3D Filament - 1kg

1kg roll. ABS (Acrylonitrile butadiene styrene) is an impact resistant and tough oil based material made from styrene, acryl and butadiene. It has a higher melting point compared to PLA, requires a heat bed during the printing process, but is stronger and more flexible.

Colour	Weight	Cat.	Qty 1+	Qty 3+	Qty 6+
Black	1kg	TL4070	$59.95	$53.95	$47.95

Tech talk

FILAMENT TYPES

Description Summary of filament types

PLA (Polylactic Acid): Commonly used filament. Odourless, low warp. Does not need heated bed. Environmentally friendly. Made from corn starch.

ABS (Acrylonitrile Butadiene Styrene): Very durable. Will withstand high temperatures. Needs heated bed. Can be finished (after printing) with Acetone to produce glossy finish.

PET (Polyethylene Terephthalate): A plastic commonly used in plastic bottles. Stronger and more flexible than ABS. High degree of successful printing outcomes.

Other filament types: These are usually combinations of the base plastics above loaded with fillers to give the filament individual properties, e.g. "wood" appearance, metallic, etc.

See page A18 for more details.

1.75MM ESUN FILAMENT

eSun are regarded as one of the leading manufacturers of high quality resin & 3D filament, known for producing smoother prints & better adhesion. We have partnered with eSun to expand our range of resin & filament colours and types, including some new exotics, to hopefully ensure we have the right filament for your next work of art.

NEW

PLA+

The all new eSUN PLA+ filaments are 100% bio-degradable and FDA food safety approved. PLA+ is 10 times stronger than regular PLA and has no wire-drawing problems, meaning the surface of the printouts will be smoother and more delicate. With a low material shrinkage rate giving a uniform diameter & no cracking or brittle issues.

100% Bio-degradable

TL4458

Specifications	ALL
Best Printing Temp.	200°C to 220°C
Bed Temp.	0°C to 70°C
Printing Speed	30 to 90mm/s
Movement Speed	90 to 150mm/s

PLA+	Weight	Cat.	Qty 1+	Qty 3+	Qty 6+
Black	1kg	TL4454	$39.95	$35.95	$31.95
White	1kg	TL4455	$39.95	$35.95	$31.95
Clear	1kg	TL4481	$39.95	$35.95	
Pink	1kg	TL4456	$39.95	$35.95	$31.95
Purple	1kg	TL4457	$39.95	$35.95	$31.95
Fire Eng. Red	1kg	TL4458	$39.95	$35.95	$31.95
Blue	1kg	TL4459	$39.95	$35.95	$31.95
Red	1kg	TL4460	$39.95	$35.95	$31.95
Yellow	1kg	TL4461	$39.95	$35.95	$31.95
Green	1kg	TL4462	$39.95	$35.95	$31.95
Orange	1kg	TL4463	$39.95	$35.95	$31.95
Gold	1kg	TL4464	$39.95	$35.95	$31.95

PETG

The eSUN PETG filaments are stronger than regular PLA, having similar properties to that of ABS without common print issues that come with it. It also has no wire-drawing problems, meaning the surface of the printouts will be smoother and more delicate. A low material shrinkage rate gives a uniform diameter and no cracking or brittle issues.

Stronger than regular PLA

TL4470

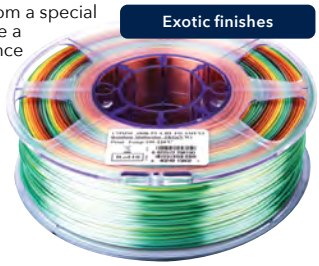
Specifications	ALL
Best Printing Temp.	230°C to 250°C
Bed Temp.	0°C to 80°C
Printing Speed	30 to 90mm/s
Movement Speed	90 to 150mm/s

PETG	Weight	Cat.	Qty 1+	Qty 3+	Qty 6+
Black	1kg	TL4465	$39.95	$35.95	$31.95
White	1kg	TL4466	$39.95	$35.95	$31.95
Natural	1kg	TL4467	$39.95	$35.95	$31.95
Blue	1kg	TL4468	$39.95	$35.95	$31.95
Yellow	1kg	TL4469	$39.95	$35.95	$31.95
Green	1kg	TL4470	$39.95	$35.95	$31.95
Red	1kg	TL4471	$39.95	$35.95	$31.95

eSilk

The eSUN eSilk filaments are made from a special mix of PLA+ & certain additives to give a glossy & slightly transparent appearance when printed.

Exotic finishes



TL4480

Specifications	ALL
Best Printing Temp.	190°C to 220°C
Bed Temp.	0°C to 80°C
Printing Speed	30 to 90mm/s
Movement Speed	90 to 150mm/s

ESILK	Weight	Cat.	Qty 1+	Qty 3+	Qty 6+
Gold	1kg	TL4477	$39.95	$35.95	$31.95
Silver	1kg	TL4478	$39.95	$35.95	$31.95
Copper	1kg	TL4479	$39.95	$35.95	$31.95
Rainbow	1kg	TL4480	$49.95	$44.95	$39.95

ABS+

The eSUN ABS+ filaments are extremely durable, lightweight alternatives to PETG & PLA. Able to withstand heat and stress without cracking or weakening, finished prints will hide blemishes & minor print issues. ABS+ is highly resistant to chemicals, making it a great base for gluing, sanding & painting.

Extremely durable & lightweight

TL4474

Specifications	ALL
Best Printing Temp.	220°C to 260°C
Bed Temp.	90°C to 110°C
Printing Speed	30 to 90mm/s
Movement Speed	90 to 150mm/s

ABS+	Weight	Cat.	Qty 1+	Qty 3+	Qty 6+
Black	1kg	TL4472	$39.95	$35.95	$31.95
White	1kg	TL4473	$39.95	$35.95	$31.95
Red	1kg	TL4474	$39.95	$35.95	$31.95
Silver	1kg	TL4475	$39.95	$35.95	$31.95

3D PRINTING FILAMENT STORAGE

eSUN eBox Filament Storage Dry Box with Built-in Heater

The eSUN eBox Filament Storage Dry Box is the new filament storage box designed by eSUN. Its not just a storage box but actively heats up to keep the filament dry. With a maximum heating temperature of 80°C (heating panel temperature), eBox can also be used to create a completely dry environment for your filament and to actively dry out the moisture in some filaments. The eBox also integrates a weighing function which allows customers to weigh the filament left and check how much filament costs for each print.

- Filaments are rack placed
- Sealed protection, dust-free
- Space to add a silica gel pack
- Set the heater time and temperature
- Real-time filament weight detection
- Anti-skid rubber feet

Filament not included.

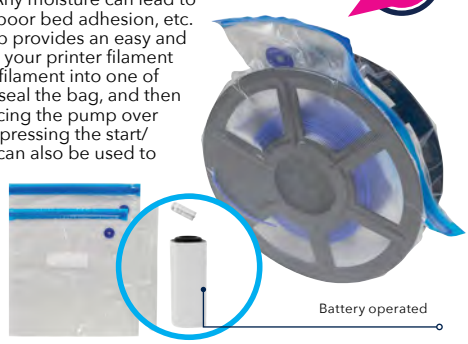
NEW

	Cat.	Qty 1+	Qty 3+
eBox Filament Storage Dry Box	TL4430	$99.95	$89.95

Mini Auto Vacuum Pump with Bags

If you own a 3D printer, it is important to keep any unused filament dry to ensure a better build quality of your prints. Many filament types are hygroscopic which means they can draw in moisture from the air. Any moisture can lead to stringing, air bubbles, poor bed adhesion, etc. This mini vacuum pump provides an easy and affordable way to keep your printer filament dry. Simply insert your filament into one of the six bags provided, seal the bag, and then draw out the air by placing the pump over the bag's air valve and pressing the start/stop button. The bags can also be used to keep food fresher for longer. 4 x AA batteries required (not included). Supplied with 6 reusable bags (3pcs 30x34cm, 3pcs 26x34cm)

NEW



	Cat.	Qty 1+	Qty 3+	Qty 6+
Vacuum with 6 Bags (2 Sizes)	TL4390	$34.95	$30.95	$27.95
Pack of 6 Bags (2 Sizes)	TL4392	$9.95	$8.95	$7.95

3D PRINTING EXOTIC FILAMENT

pick me EXOTIC FILAMENT GUIDE

Our range of exotic filaments are sure to appeal to anyone interested in 3D printing. There's filament that makes your creation look like it's made from wood, glow-in-the-dark, flexible and colour changing filament when heat is applied, and more. Imagine the possibilities with the conductive filament! All of our exotic filaments are 1.75mm, supplied in 250g rolls, and are all suitable for our current and superseded 3D printers.

- 250g Roll

Note: Exotic filament not suitable for our 3D pen.

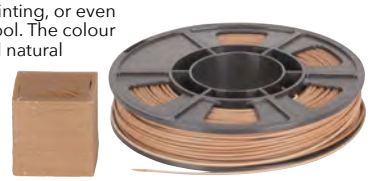
		Extruder Temp (°C)	Bed Temp (°C)	Notes:
	GLOW IN THE DARK	180°C to 240°C	20°C to 80°C	Glow-in-the-dark filament is a great product to decorate children's bedrooms, from glowing light switches to a starry sky on the ceiling. Your prints will shine brightest immediately after turning out the lights, but dim quickly to a soft glow in the night. Use your normal print settings for PLA, but add more perimeters to your prints. The more perimeters, the more glow. Glow-in-the-dark filament is available in PLA filament 1.75mm.
	TPE	210°C to 225°C	20°C to 55°C	TPE filament is a flexible 3D printing material that feels and acts much like flexible rubber. TPE filament can be used to make parts that can bend or must flex to fit their environment: stoppers, belts, springs, phone cases, and more. Due to its flexibility, much slower print speeds must be used to keep the filament from binding in the extruder- we print at 20% speed.
	WOOD	175°C to 250°C	30°C to 50°C	These wood-like 3D printer materials give 3D printed objects the look and feel of fibreboard. They imbue parts with other wood-like attributes, such as the ability be cut, painted, and sanded. These filaments use PLA as their base, and mix other materials (usually in powder form) into them. The PLA gives the 3D printer compatibility and ease of use while the material contributes to the look, feel, and properties of the filament. With these organic fills, be cautious of too high of a temperature, as it will result in the wood burning which will give you a darker coloured print. It is important to remove the filament from the extruder fairly soon after finishing a print, as the filament will begin to burn in the nozzle and start to clog it.
	METALLIC	195°C to 220°C	20°C to 50°C	These metals infused PLA filaments are tougher to print than Standard PLA filament, but because of the metal blended with the plastic, prints are heavier and thus, feel more authentic. Finished 3D prints can be sanded and polished to create beautiful and unique pieces. Unpolished, the filament looks like cast metal fresh from a mould, with a dull, matte, gritty appearance. With just a little finishing and polishing, however, you can easily create any look like you desire. 3D Printing with these metals is perfect for printing jewellery, props, costumes, figurines, and robots. These filaments are great not only for hobbyists looking to make faux metal prints, but serious designers as well.

3D PRINTER EXOTIC FILAMENT

Wood Finish

Perfect for recreating antique furniture and recreating small wooden features. Prints with a smooth finish that is ideal for painting, or even finishing with a wood-burning tool. The colour also suits models of animals and natural creatures.

- Contains wood, so models smell like wood
- Can be printed at different temperatures to give different colours



	Diameter	Cat.	Qty 1+	Qty 3+	Qty 6+
Wood	1.75mm	TL4124	$19.95	$17.95	$15.70

Gold Finish

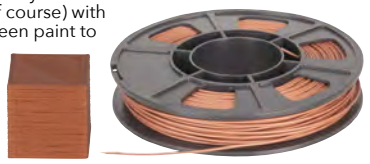
Gold colour only. This filament is every costume jeweller's dream come true! Your imagination will be the only limit as you recreate your favourite bracelet, ring or brooch. Create your own gold trophy or medal and thank yourself for a job well done.

	Diameter	Cat.	Qty 1+	Qty 3+	Qty 6+
Gold	1.75mm	TL4132	$19.95	$17.95	$15.70

Copper Finish

Did you know that the Statue of Liberty is made of copper? Now you can recreate any similar structure (miniaturised version of course) with this filament. Brush with some green paint to give a classic corroded copper patina.

- Contains copper, giving models weight and excellent thermal properties



	Diameter	Cat.	Qty 1+	Qty 3+	Qty 6+
Copper	1.75mm	TL4126	$24.95	$22.50	$19.95

Green Glow-in-the-Dark

Print your own bedroom skyscape or other novelty items with glow in the dark filament. Glows after exposure to most light sources.

- White material glows green

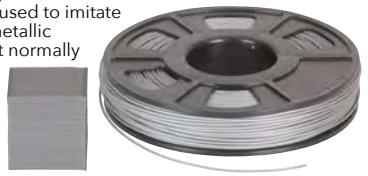
GLOWS GREEN

	Diameter	Cat.	Qty 1+	Qty 3+	Qty 6+
Green Glow in the Dark	1.75mm	TL4134	$19.95	$17.95	$15.95

Aluminium Finish

Ideal for printing a classy looking enclosure for your next project. Could also be used to imitate silver or stainless steel. Gives a metallic look without the unwieldy weight normally associated with solid metal objects.

- Contains aluminium



	Diameter	Cat.	Qty 1+	Qty 3+	Qty 6+
Aluminium	1.75mm	TL4128	$24.95	$22.50	$19.95

Flexible

If you're looking to print something with a bit of bendiness, try our flexible filament. Has excellent adhesion and prints well without splitting. Due to increased flexibility, printer may need modification to guide filament correctly. Pale pink skin-like colour.

STAYS FLEXIBLE

	Diameter	Cat.	Qty 1+	Qty 3+	Qty 6+
Flexible	1.75mm	TL4136	$19.95	$17.95	$15.95

3D PRINTER EXOTIC FILAMENT CONTINUED

Conductive PLA

Bring your 3D printed projects to life with this electrically conductive PLA filament! Bulk resistivity is 0.6 ohms per cm3 - note that this is not the same as "grams per centimetre", but refers to the resistance of a 1cm cube across opposite sides with full contact. The filament itself measures about 4k ohms per metre, so it is mostly suitable for signal level voltages, but it is conceivable that you could illuminate some LEDs for example. The conductive properties come from graphene embedded in PLA which is biodegradable.

Note: Due to the additive in this filament it is very brittle and should be handled with care.

ELECTRICALLY CONDUCTIVE

	Diameter	Cat.	Qty 1+	Qty 3+	Qty 6+
Conductive	1.75mm	TL4142	$19.95	$17.95	$15.95

1.75mm PET

250g roll of 1.75mm PET filament for 3D printers. Recyclable PET is a stronger alternative to PLA and doesn't smell as bad as ABS when printing. There's four variants of PET available, red, blue, green and yellow, and they are all translucent, giving a stand-out look to your 3D prints.

RECYCLABLE PET

Colour	Weight	Cat.	Qty 1+	Qty 3+	Qty 6+
Red	250g	TL4152	$19.95	$17.95	$15.95
Yellow	250g	TL4154	$19.95	$17.95	$15.95
Green	250g	TL4155	$19.95	$17.95	$15.95
Blue	250g	TL4156	$19.95	$17.95	$15.95

3D PRINTING RELATED TOOLS

Flashforge 3D Printing Tool Kit

Keep your 3D printer in good working order with this comprehensive toolkit. It includes commonly required tools that you need to service your printer or to unclog a blocked print head. Print heads blockages are common in 3D printing so this kit can save you a lot of time and frustration, and have you back printing quickly.

The kit includes:

- Phillips Screwdriver
- Pliers with Cutter
- Long rounded Hex
- Curved Scraper
- Silicon Grease Satchel
- 0.4mm Wire unclog
- Butane Torch
- Flathead Screwdriver
- Long Flatnose Pliers
- Push Tool
- Glue Stick
- Nylon Tube
- Nozzle Spanner
- Carry Case

	Cat.	Qty 1+	Qty 3+	Qty 6+
3D Printing Tool Kit	TD2132	$49.95	$44.95	$39.95

3D PRINTING RELATED ACCESSORIES

Heat Resistant Polyimide Tape - 33m

Originally developed for space missions, this is a heat resistant polyimide film tape with a very similar composition to Kapton® but without the associated brand name cost. Its superior adhesion to ABS makes it the ideal film to coat a 3D printer bed.

- Temperatures up to 250°C
- 33m long
- 0.055mm thickness

Width	Length	Cat.	Qty 1+	Qty 4+	Qty 10+
6mm	33m	NM2890	$7.95	$7.15	$6.35
16mm	33m	NM2892	$11.95	$10.45	$9.45
24mm	33m	NM2894	$16.95	$14.95	$13.45

Flashforge Spare Build Tape Pads

Stop your 3D models lifting from the print bed with this spare build tape pad to suit various Flashforge printers.

Suits	Cat.	Qty 1+	Qty 3+	Qty 6+
Flashforge Adventurer 3	TL4257	$8.95	$8.05	$7.15
Flashforge Finder	TL4221	$8.95	$8.05	$7.15
Flashforge Guider II	TL4241	$9.95	$8.95	
Flashforge Inventor	TL4231	$9.95	$8.95	$7.95

3D PRINTING BOOK

DIY 3D Printing Book

This book, compiled on 3D printing with Autodesk 123D, Tinkercad, and MakerBot reveals how to turn your innovative ideas into physical products that you can use or sell! Will guide you on how to operate powerful, free software from Autodesk and bring your creations to life with the MakerBot - a leading consumer printer - or an online service bureau. The included practical lessons take you through the Design, Catch, Meshmixer, Tinkercad, Make, and CNC Utility apps, and the MakerBot Desktop. Fun projects, easy-to-follow instructions, & clear screenshots progress from installing the software to printing the design. Videos & digital files accompany this hands-on guide.

- Make your own creations with Design and Tinkercad
- Download editable, premade content
- Generate construction documents with the Layout feature
- Create and edit a reality capture model with Catch
- Edit and mash up .stl files with Meshmixer
- Navigate the MakerBot Desktop
- Print the model on your own machine or with a service bureau

	Cat.	Qty 1+
Softcover, 302 pages. 274 x 216mm	BM7122	$49.95

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pick me SOLDERING STATIONS

ENTRY MID PRO

	TS1610	TS1620	TS1564	TS1640	TS1584	TS1648	TS1440
Station Type	Soldering	Soldering	Soldering	Soldering	Soldering	Soldering & Hot Air	Soldering
Power (Watts)	10W	48W	48W	60W	55W	300W	65W
Temp. Range	100-450˚C	150-450˚C	150-450˚C	160-480˚C	350-398˚C*	50-480°C Soldering 100-500°C Hot Air	200-480˚C
Display				LED		LED	LED
ESD Safe				•	•	•	•
Page	A20	A20	A20	A21	A22	A22	A21
Price	$34.95	$59.95	$119.00	$159.00	$379.00	$249.00	$329.00

Temperature rating is set by the soldering iron tip. ESD means Electro Static Discharge

SOLDERING STATIONS - 240VAC

10W Soldering Station - 240VAC

Exceptionally delicate, temperature controlled soldering iron. With low pencil weight will help reduce fatigue on your hands when working for prolonged periods. Compact so you can almost keep it in your toolkit, and still have the precision you need on-site. The delicate pencil has enough power to work with fine components and circuits and good for very thin hookup style cable. Suitable for lead-based and lead-free solder thanks to the 100-450°C temperature range. Temperature is selected with the rotary dial, and the base unit includes an integrated stand.

- Integrated soldering pencil holder

Specifications	TS1610
Recommended Use	Hobby
Power	10W
Temperature Range	100-450˚C
Analogue/Digital	Analogue
ESD Rated	No
Lead-Free Rated	No
Dimensions	100(L) x 65(W) x 63(D)mm, 600g

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
Soldering Station 10W	TS1610	$34.95	$30.95	$27.95
Spare Pencil	TS1611	$4.95	$4.45	$3.95

48W Soldering Station - 240VAC

An ideal entry-level soldering station for the hobby user. This station comes with a lightweight iron with anti-slip grip and tip cleaning sponge, with temperature adjustment up to 450°C . It also has a 4mm banana socket connected to mains earth for soldering static-sensitive components.

- Spare tip 0.5mm conical: TS1622

Specifications	TS1620
Recommended Use	Hobby
Power	48W
Temperature Range	150-450°C
Analogue/Digital	Analogue
ESD Rated	No
Lead-Free Rated	No
Dimensions	135(L) x 82(W) x 70(H)mm

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
Soldering Station 48W	TS1620	$59.95	$53.95	$47.90
0.5mm Conical Tip	TS1622	$8.95	$8.25	$6.95

48W Soldering Station - 240VAC

Ideal station for the advanced hobby user. It features accurate analogue temperature adjustment, ceramic element and a lightweight pencil that will give you hours of fatigue-free soldering. The stand has spare tip storage and is very sturdy.

- Spare tips/pencil available

Specifications	TS1564
Recommended Use	Hobby
Power	48W
Temperature Range	150 - 450°C
Analogue/Digital	Analogue
ESD Rated	No
Lead-Free Rated	Yes
Dimensions	150(L) x 115(W) x 92(H)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Soldering Station 48W	TS1564	$119.00	$106.95	$94.95
Spare Pencil	TS1565	$39.95	$35.90	$31.90
0.5mm Conical Tip	TS1566	$9.95	$9.25	$7.75
2.0mm Chisel Tip	TS1567	$9.95	$9.25	$7.75

1 YEAR WARRANTY

SOLDERING STATIONS - 240VAC CONTINUED

60W ESD Safe Soldering Station with LED Display - 240VAC

Featuring a powerful 60W heating element, you can dial in your preferred temperature settings with accuracy thanks to the digital display. It comes supplied complete with a vented soldering iron stand, with integrated sponge and tray to keep it clean. Select from Celsius or Fahrenheit temperature display.

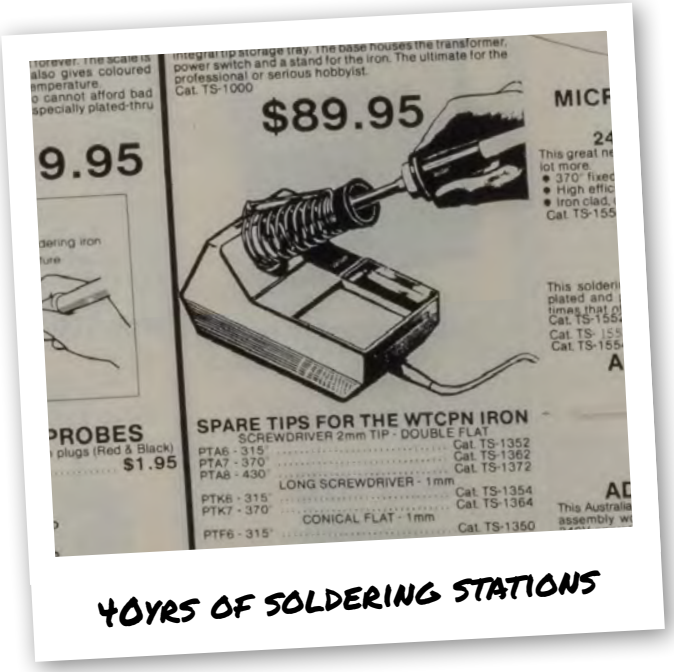
- 30sec warm-up time to 350°C (Approx.)
- High temperature stability
- LED display

Specifications	TS1640
Recommended Use	Hobby
ESD Rated	Yes
Lead-Free Rated	Yes
Analogue/Digital	Digital
Power	60W
Temperature Range	160-480°C
Operating Voltage	240VAC
Dimensions	160(L) x 104(W) x 124(D)mm
Weight	1.5kg

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
Soldering Station 60W	TS1640	$159.00	$142.95	$126.95
Spare Pencil	TS1641	$39.95	$35.95	$31.95
0.5mm Conical Tip	TS1642	$9.95	$8.95	$7.95
2mm Conical Tip	TS1643	$9.95	$8.95	$7.95
3mm Bevel Tip	TS1644	$9.95	$8.95	$7.95

* ESD means Electro Static Discharge



65W ESD Safe Anti-Static Soldering Station with LED Display - 240VAC

Precision, Japanese manufactured instrument with excellent temperature stability and anti-static characteristics.

SOLDERING PENCIL:

Lightweight pencil features a grounded tip, ceramic heater, integrated temperature sensor and very supple silicone rubber grip. The temperature sensor provides precise tip-temperature information to the heater controller, which maintains the selected heat setting with a high degree of accuracy. The tip fits snugly over the heater element providing fast heat transfer and tip temperature recovery during heavy soldering.

- 0.5mm tip supplied

CONTROL UNIT:

Includes a digital temperature display unit, rotary temperature control, calibration control and display changeover switch to display either the desired or actual tip temperature. The darkened see-through cover prevents accidental temperature change but allows for easy access when required.

- Control dimensions, weight:
  146(L) x 115(W) x 98(H)mm, 1.5kg

MADE IN

Specifications	TS1440
Recommended Use	Trade / Industrial
ESD Rated	Yes
Lead-Free Rated	Yes
Analogue/Digital	Digital
Power	65W
Temperature Range	200-480°C
Dimensions	146(L) x 115(W) x 98(H)mm

2 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
Soldering Station 65W	TS1440	$329.00	$289.00	$259.00
Replacement Sponge	TS1445	$7.95	$6.95	$6.25
0.2mm Conical Tip	TS1442	$19.95	$17.95	$15.95
0.5mm Conical Tip	TS1441	$19.95	$17.95	$15.95

SPARE PARTS FOR DISCONTINUED SOLDERING STATIONS

Weller

Part	mm	°C	Cat.	Qty 1+	Qty 3+	Qty 6+
PTA6	1.6	315	TS1352	$24.95	$22.45	$19.95

ACCESSORIES FOR TS1513	Cat.	Qty 1+	Qty 3+	Qty 6+
Spare Desoldering Gun	TS1514	$54.95	$49.45	$43.90
Spare Ceramic Heater	TS1515	$16.95	$14.95	$13.35
Spare Filter Set of 2	TS1519	$1.95	$1.75	$1.55
Spare Black Plastic Cap	TS1520	$2.95	$2.65	$2.35

SOLDERING STATIONS - 240VAC CONTINUED

Thermaltronics Curie Heat Technology Soldering Station - 240VAC 55W Rated

It uses a proven technology, Curie point temp sensing with a new twist. The tip is heated by RF induction to bring the tip up to operating temp. The soldering iron tip is the heater. Older Curie point soldering irons like the famous Weller W-TCP used a separate Curie-switch, heater and tip. There are thermocouples, varistors or other temp sensors that only complicate things on inferior irons. The thermal inertia with the Thermaltronics product is far lower. The system consists of the base power unit which connects to mains 240V. The soldering pencil accepts a cartridge tip (which is also the heating element) and a burn-proof silicon rubber cord. The third element in the system is the pencil iron stand. This stand features a 'dry'-type tip cleaner which is made from machine curled brass and also a standard sulphide free tip sponge.

- Tips can be hot swapped
- Constant tip temperature
- Low power idle
- Under 10 second heat-up
- Rapid recovery from soldering load
- No overshoot
- No calibration needed
- ESD rated
- Can work leaded and unleaded solder

CONCLUSION

This is a very exciting development in soldering technology. We are sure that you will be delighted with this product.

Note: Not stocked at all stores but can be ordered.

† All tips are 350-398°C .

THERMALTRONICS

A must for surface mount hand soldering

Perfect for the serious hobbyist, trade or industrial use

Specifications	TS1584
Power	55W
Temperature Range	350°C - 398°C (determined by tip)
Output Frequency	470kHz
Tip to GND Resistance	<2 Ohms DC
Tip tp GND Potential	2mW, true RMS 50 - 500Hz
Dimensions	155(H) x 110(W) x 92(D)mm
Weight	1.3kg

	Cat.	Qty 1+	Qty 3+	Qty 6+
Soldering Station (inc 0.5mm Tip)	TS1584	$379.00	$339.00	$299.00
Thermaltronics Replacement Iron	TS1585	$129.00	$115.95	$102.95
0.51mm Conical Tip†	TS1586	$29.95	$26.95	$23.95
0.2mm Conical Sharp Tip*†	TS1589	$34.95	$31.45	$27.95
1.0mm Conical Tip†	TS1587	$29.95	$26.95	$23.95
3.2mm Chisel Tip†	TS1588	$29.95	$26.95	$23.95

click & collect

Click and Collect is now available at all Jaycar stores! Simply place your order online and the team at your local store will get the order together for you, ready to collect in just 1 hour!

ESD Safe Solder/Desolder Rework Station

Complete solder/desolder station for professional and hobbyist use. Designed for soldering and desoldering all types of surface mounted IC, PCB, or components, and features an innovative heater and sensor that provides a quick heat-up and rapid temperature recovery. The unit will immediately enter into Working Mode when you pick up the handle, and return to Standby Mode when you put the handle back into the holder. The control unit has two LED displays with controls to the set temperature and the actual tip or nozzle temperature in Celsius and Fahrenheit. The temperature is easily adjusted in 1° increments with simple up/down buttons and the soldering/rework functions can be operated independently of each other. ESD safe. The heat gun can be calibrated from 3L/min to 24L/min and is supplied with 3 extra heat-gun attachments for different size components and jobs. Spare soldering iron tips are available separately.

1 YEAR WARRANTY

Specifications	TS1648
Soldering Iron:	4-pin, 24V, 60Watt
Hot Air Pump:	300W
Temperature Range:	
Soldering Iron	50-480°C
Hot Air Pump	100-500°C
Weight:	6kg
Dimensions:	155(L) x 125(H) x 110(W)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Rework Station	TS1648	$249.00	$219.00	$199.00
0.5mm Conical Tip	TS1642	$9.95	$8.95	$7.95
2mm Conical Tip	TS1643	$9.95	$8.95	$7.95
3mm Bevel Tip	TS1644	$9.95	$8.95	$7.95

FUME EXTRACTOR

Solder Fume Extractor

Removes dangerous solder fumes from the work area. Suitable for use in production lines, service centres, R&D workbenches or the hobbyist. It incorporates a ball bearing high volume fan to maximise airflow which is directed upwards at the rear of the unit to aid in safe dispersion of fumes. ESD safe.

- Spare filters, pack of 5 - sold separately
  Cat. TS1581
- Dimensions: 260(H) x 200(W) x170(D)mm

1 YEAR WARRANTY

Don't pay silly prices elsewhere. This one works fine.

	Cat.	Qty 1+	Qty 3+	Qty 6+
Fume Extractor	TS1580	$74.95	$66.95	$59.95
Spare Filters - Pack of 5	TS1581	$9.95	$8.75	$7.75

pick me ELECTRIC SOLDERING IRONS

ENTRY
MID
PRO

	TS1465	TS1468	TS1554	TS1540	TS1470	TS1475	TS1485	TS1430	TS1535	TS1532	TS1536	TS1545
Voltage	240V	240V	240V	240V	240V	240V	240V	240V	3VDC	5V USB	12VDC	5V USB
Power (Watts)	25W	25W	20W/130W	30W	40W	40W	80W	15W	6W	8W	30W	30W
Temp. Range	380°C	360-400°C	420°C	200-450°C	420-450°C	470°C	530°C	320°C	430°C	380-400°C	430°C	600°C
Page	A23	A23	A23	A23	A23	A23	A23	A23	A24	A24	A24	A24
Price	$14.95	$19.95	$19.95	$32.95	$24.95	$19.95	$24.95	$89.95	$21.95	$14.95	$19.95	$99.95

SOLDERING IRONS - 240VAC

25W Soldering Iron

Ideal for the hobbyist and handy person. Has a stainless steel barrel and orange cool grip, impact resistant handle.

- Spare tip available TS1466

Our most popular iron!

1 YEAR WARRANTY

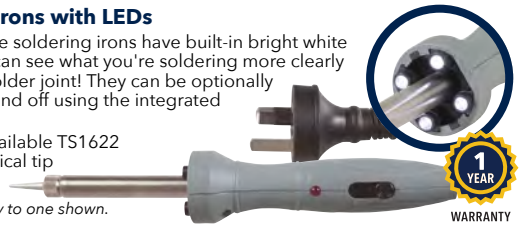
DURATECH

	Cat.	Qty 1+	Qty 3+	Qty 6+
25W Soldering Iron	TS1465	$14.95	$13.45	$11.95
Spare Tip	TS1466	$4.95	$4.45	$3.95

Soldering Irons with LEDs

Brilliant! These soldering irons have built-in bright white LEDs so you can see what you're soldering more clearly for a better solder joint! They can be optionally switched on and off using the integrated switch.

- Spare tip available TS1622 -0.5mm conical tip



1 YEAR WARRANTY

Colour may vary to one shown.

	Cat.	Qty 1+	Qty 3+	Qty 6+
25W Soldering Iron	TS1468	$19.95	$17.95	$15.95
40W Soldering Iron	TS1470	$24.95	$22.45	$19.95
Spare Tip	TS1622	$8.95	$8.25	$6.95

20/130W Turbo Soldering Iron

Sometimes you need that extra bit of heat in your soldering. Push the little red button on this iron and you get a lot more power, from 20 watts to 130 watts to be precise. Weller-style removable barrel, plated tip and ceramic element.

- Spare tips available: TS1555 - 0.5mm conical tip, TS1556 - 1mm conical tip, TS1557 - 2mm chisel

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
20/130W Turbo Soldering Iron	TS1554	$19.95	$17.95	$15.95
0.5mm Conical Tip	TS1555	$4.95	$4.45	$3.90
1mm Conical Tip	TS1556	$4.95	$4.45	$3.90
2mm Chisel Tip	TS1557	$4.95	$4.45	$3.90

40W Soldering Iron

Ideal for the hobbyist and handy person. Has a stainless steel barrel and orange cool grip impact-resistant handle.

- Electricity safety approved
- Spare tip to suit use Cat. TS1476

1 YEAR WARRANTY

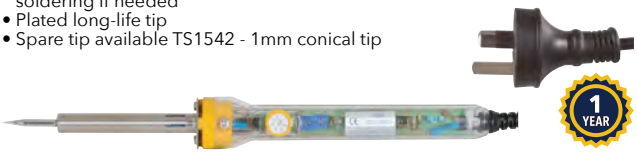
DURATECH

	Cat.	Qty 1+	Qty 3+	Qty 6+
40W Soldering Iron	TS1475	$19.95	$17.95	$15.95
Spare Tip	TS1476	$6.95	$6.25	$5.55

30W Temperature Controlled Soldering Iron

If your budget doesn't extend to a soldering station, you can still have temperature control. This iron is adjustable with a dial on the handle.

- It has a temperature range of 200 - 450°C , high enough for silver soldering if needed
- Plated long-life tip
- Spare tip available TS1542 - 1mm conical tip



1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
30W Soldering Iron	TS1540	$32.95	$28.95	$25.95
1mm Conical Tip	TS1542	$4.95	$4.45	$3.90

80W Soldering Iron

Ideal for the hobbyist and handy person. Has a stainless steel barrel and orange cool grip, impact resistant handle.

- Ideal for heavy electrical work, lugs, etc.
- Electricity safety approved
- Spare tip to suit use Cat. TS1486

1 YEAR WARRANTY

DURATECH

	Cat.	Qty 1+	Qty 3+	Qty 6+
80W Soldering Iron	TS1485	$24.95	$22.45	$19.95
Spare Tip	TS1486	$8.95	$7.95	$6.95

15W goot® Soldering Pencil - 240V

This high quality soldering iron is made in Japan by goot®. This soldering iron offers exceptional heat recovery. The ceramic heater is automatically controlled by the heating load of the tip. With its high insulation and low current leakage, soldering of precision flat ICs and CMOS is safe. The heater on/off control uses a zero-volt switch circuit which reduces electrical noise.

- Tip temperature is set at 320°C
- The power lead is made from silicone rubber - very flexible
- The handle incorporates a ribbed rubber piece for extra grip
- Electricity Safety Approval Number SAITE20185

goot

MADE IN

2 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
15W Soldering Pencil	TS1430	$89.95	$80.95	$71.95
0.5mm Conical Tip (As Supplied)	TS1432	$19.95	$17.95	$15.95
0.3mm Conical Tip	TS1434	$19.95	$17.95	$15.95
3.0mm Chisel Tip	TS1436	$19.95	$17.95	$15.95

HAND SOLDERING IRONS

SOLDERING STARTER KITS

My First Soldering Iron

At last you can have your own soldering iron with minimal adult supervision (min 12 years+). It includes a full power iron with long-life tip, a spare tip, stand for the iron (when it's hot), metal solder removal sucker and a generous portion of 1mm solder wire in a handy dispenser tube. This set will become your best friend in the world of electronics!

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
Starter Kit	TS1651	$27.95	$24.95	$21.95

25W Soldering Iron Starter Kit with DMM

The ideal starter package for young electronics enthusiasts or the home handyman, this kit contains everything needed for basic electronics work, electronics projects or automotive circuits. The kit includes:

- Digital multimeter
- 25W soldering iron with spare tip
- De-soldering tool with spare tip
- Lead free solder
- Phillips head screwdriver
- Flat head screwdriver
- Side cutters
- Long nose pliers

	Cat.	Qty 1+	Qty 3+	Qty 6+
25W Iron Kit	TS1652	$44.95	$39.95	$35.95
Spare Tip To Suit	TS1622	$8.95	$8.25	$6.95

RECHARGEABLE SOLDERING IRON

Rechargeable Lithium-Ion Soldering Iron Set with Case

Everything you need to solder without the need for mains power or butane gas. Power is provided by an internal Li-ion battery for up to 50 minutes of soldering from a full charge. A quick 5 minute charge can provide 90 seconds of use if the battery isn't charged when you go to use it. An integrated LED provides light to what you are soldering, and safety features include overcharge, over discharge, and short circuit protection. The kit comes complete in a handy carry case with one 12W soldering tip (500°C), one 30W soldering tip (600°C), hot knife, sponge, and solder. To charge, simply plug it into an available USB power source. ESD safe.

- 30W/12W Tips
- Hot Knife
- Rechargeable Li-ion Battery
- ESD Safe
- Up to 50 Minutes Continuous Use from a Full Charge
- Regain 90 Seconds Use from a 5 Minute Charge
- LED Light for Illumination

RECHARGEABLE

Specifications	TS1545
Battery	3.7V, 2500mAh Rechargeable Li-ion
Max. Temperature	600°C (12W Tip: 500°C, 30W Tip: 600°C)
Charging Time	3~4 Hours

	Cat.	Qty 1+	Qty 3+	Qty 6+
Rechargeable	TS1545	$99.95	$89.95	$79.95
30W Tip	TS1546	$12.95	$11.45	$9.95
12W Tip	TS1547	$12.95	$11.45	$9.95
Hot Knife Tip	TS1548	$12.95	$11.45	$9.95

5V USB SOLDERING IRON

USB Powered 8W Soldering Iron

This handy little soldering iron will work anywhere you have USB power, which let's face it, is basically everywhere these days. Even if it's from a laptop or power bank, USB power is almost easier to come by than mains power when away from the home or office, or in the workshop or shed. Unlike a conventional mains iron which heats up persistently, this one has a touch-switch to activate, and it rapidly heats to 380-400°C in just 15 seconds, and you're ready to solder. The heating element is rated at 8W, so it's useful for fine electronics and small jobs not sinking a lot of heat (such as thick cables, better left for appropriate soldering irons). The heating element is integrated into the soldering tip, so heating and cooling is very rapid. Includes a long life tip, protective cap, and USB power cable.

Note - at 8W, your USB port will need to be rated with at least 2A, which most newer charging ports are equipped to supply. Older USB ports may struggle to power this device.

- Heats up in under 15 seconds
- Cools down in under 30 seconds
- Long-life tip with protective cap
- 2 in 1 heating element and soldering tip
- Automatic shutoff

Specifications	TS1532
Input	5V USB
Power	8W
Tip Temperature	380°C - 400°C
Auto Shut Off	25 Seconds Idle
Weight	25g
Dimensions	170(H) x 20(Dia.)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
USB Powered	TS1532	$14.95	$13.45	$11.95

12V SOLDERING IRONS

30W 12VDC Soldering Iron - with Cigarette Lighter Plug

1 YEAR WARRANTY

This 12V 30W soldering iron features a fused cigarette lighter plug lead to allow you to power it from the car cigarette lighter socket. Ideal for automotive soldering. Metal sheet solder stand included.

- Dimensions: 205(L) x 35(Dia.)mm
- Lead length: 1.5 metre

	Cat.	Qty 1+	Qty 3+	Qty 6+
12VDC	TS1536	$19.95	$17.95	$15.70

BATTERY POWERED SOLDERING IRON

6W Soldering Iron - Battery Powered

1 YEAR WARRANTY

We have been surprised by the popular acceptance of this product, considering its modest power rating. Don't expect too much, but it will re-solder a dry joint or fix a solder lug, etc. It is ideal in potentially explosive situations, such as a bilge, or where petrol fumes may be present. Reaches full temp in about 10 seconds.

- Uses 3 x AA batteries (not included)
- Safety cover that locks the switch to ,"Off" so it won't discharge inside your tool box
- Dimensions: 175(L) x 36(W) x 18(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Battery	TS1535	$21.95	$19.45	$17.45

GAS SOLDERING IRONS

Note: All gas soldering products use the same butane gas, NA1020 shown on page A30

Low Cost Gas Soldering Irons

A low cost alternative, this butane gas soldering iron features adjustable tip temperature and a fold-out stand. Remove the soldering tip and you have a flame torch for heatshrink etc. Great for soldering, cutting plastic, or heat shrinking plastic.

- 210mm long

TS1111

GAS SOLDERING IRON / TORCH KIT

Extra soldering, torch and cutting tips are included, all housed in a moulded storage case.

- 3 soldering tips, 1 rope cutter, 1 torch attachment
- 178mm long

TS1112

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
Soldering Iron - Gas	TS1111	$29.95	$26.95	$23.95
Soldering Iron/Torch Kit	TS1112	$39.95	$35.90	$31.90
Spare Catalyst	TS1104	$14.95	$13.35	$11.70
1mm Conical Tip	TS1105	$4.95	$4.45	$3.90
Butane Gas - 150g	NA1020	$4.95	$4.45	$3.95

3 in 1 Heat Blower & Soldering Iron

A handy 3-in-1 unit with flame or flameless heat blower and soldering iron function. Great for general heating, drying, melting, soldering, heat shrinking etc. It also features adjustment for temperature control, Piezo ignition, child resistant latch and uses butane gas. The tip has a sturdy cap for when not in use. Ideal for hobbyists and professionals alike. Spare 1mm Conical Tip available: TH1603

Butane gas required - use NA1020.

Specifications	TH1604
Operating Time	55-95min
Gas Capacity	10ml
Temp. of Hot Blow	Up to 500°C
Temp. of Soldering	Up to 450°C
Dimensions	144(L) x 35(W) x 23(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Gas Soldering Iron	TH1604	$34.95	$30.95	$27.95
1mm Conical Tip	TH1603	$3.95	$3.45	$3.15

3 in 1 Mini Gas Soldering Tool Set

A handy gas soldering iron with flame or flameless heat blower function. Great for general heating, drying, melting, cutting, soldering, heat shrinking etc. It also features adjustment for temperature control, Piezo ignition, retractable stand, visible gas tank and child resistant latch. The tip has a sturdy cap for when not in use. Carry case includes 1mm tip, 3mm chisel tip, 5mm angle tip, hot knife tip, 1mm solder hobby pack, cleaning sponge and tray.

Spare 1mm Conical Tip available: TH1603

Butane gas required - use NA1020

1 YEAR WARRANTY

Specifications	TH1606
Operating Time	55-95min
Gas Capacity	7ml
Power Range	25W to 70W
Flame Temp	Up to 1300°C
Iron Dimensions	148(L) x 35(W) x 23(D)mm
Case Dimensions	175(W) x 125(D) x 33(H)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
3 In 1 Mini Gas Soldering Tool Kit	TH1606	$49.95	$44.95	$39.95
1mm Conical Spare Tip	TH1603	$3.95	$3.45	$3.15

Pro Gas Soldering Tool Kit

A sturdy, portable, self-igniting butane powered gas soldering iron tool kit with 3 tips. Produces a 1300°C adjustable flame for low end brazing, tin/plastic melting, automotive repair work, welding and of course heat shrinking.

Supplied with 3 interchangeable metal tips for PCB work. A handy retractable stand as well as being supplied in a plastic carry case that includes a cleaning sponge, extra tips, a deflector and a cap for the soldering iron.

1 YEAR WARRANTY

Specifications	TS1113
Operating Time	80-100 min (on minimal flame)
Gas Capacity	20ml
Ignition	Internal Piezo Crystal igniter
Weight	115g without gas
Temperature Of Torch	Up to 1300°C
Temperature Of Hot Blow	Up to 650°C
Temperature Of Soldering	Up to 500°C
Case Dimensions	236(L) x 32(W) x 37(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Pro Gas Soldering Tool Kit	TS1113	$79.95	$71.95	$63.95
3mm Flat Tip	TS1116	$5.95	$5.35	$4.75
4mm Chisel	TS1117	$5.95	$5.35	$4.75
Blower Tip	TS1118	$14.95	$13.45	$11.95
Butane Gas - 150g	NA1020	$4.95	$4.45	$3.95

Gas Soldering & Heatshrink Kit

Excellent value and a handy kit to have close at hand for those quick and urgent repairs. Includes many of the necessary accessories for your wiring and soldering needs, making it an ideal kit for the home handyman, enthusiast or electrician. Supplied in a hard plastic carry case.

This kit contains:

- Pro Gas Soldering Iron with built-in stand, and cap.
  Spare tips included: Chisel tip, anvil tip, flat tip, deflector
- Solder, cleaning sponge
- 3mm Desolder Braid (NS3020)
- 115mm Stainless Steel Side Cutters (TH1890)
- Heavy Duty Wire Stripper/Cutter/Crimper with Wire Guide (TH1827)
- Small 9 x LED Torch 26(Dia.) x 84mm (Requires 3 x AAA batteries)
- 28 Piece Screwdriver set
- Heatshrink assortment:
  1.5mm - 20 x black, 5 x red, 5 x clear
  2.5mm - 10 x black, 3 x red, 3 x clear
  3.0mm - 8 x black, 2 x red, 2 x clear
  5.0mm - 7 x black, 2 x red, 2 x clear
  6.0mm - 3 x black, 1 x red, 1 x clear
- Straight Demagnetised 116mm Long Tweezers,
  Curved Demagnetised 121mm Long Tweezers
- Case dimensions: 130(W) x 150(D) x 70(H)mm

INCLUDES PRO GAS SOLDERING IRON

	Cat.	Qty 1+	Qty 3+	Qty 6+
	TS1115	$129.00	$115.95	$102.95

PORTASOL GAS SOLDERING IRONS

Portasol® Technic Gas Soldering Iron

The Portasol® Technic combines compact power, and convenient reliability, making it one of the most versatile gas soldering irons available. It offers a run time of around 60 minutes, and tip temperature is adjustable up to 450°C . With equivalent electrical power of between 10 and 60 Watts, it is ready to tackle just about anything. The protective end cap features a built in flint type igniter, and if the gas is left on, it will turn it off when replaced. If a compact, versatile and reliable gas iron is what you're after, then the Portasol® Technic is for you.

Includes Tip Cover.

portasol

1 YEAR WARRANTY

Specifications	TS1305
Operating Time	60 min (approx).
Refill Time	10 sec (approx).
Ignition	Flint ignitor in end cap.
Dimensions	170(L) x 19(Dia)mm.
Weight	60g without gas

Cat.	Qty 1+	Qty 3+	Qty 6+
TS1305	$69.95	$62.95	$55.95

TIPS TO SUIT	Cat.	Qty 1+
1.0mm Conical	TS1306	$23.95
2.4mm Chisel	TS1307	$23.95
4.8mm Chisel	TS1308	$23.95

Portasol® Pro Piezo Gas Soldering Iron

The Portasol® Pro Piezo is a powerful gas soldering iron featuring an adjustable temperature control allowing soldering tip temperatures up to 580°C . With equivalent electrical power of between 15 and 75 Watts, there is little that's not possible with this beauty. It incorporates a viewing window at the end of the gas tank, to keep an eye on the fuel level. The fuel tank fills in around 20 seconds, and will provide approximately 45 minutes of run time. Ignition is via the built in Piezo crystal mechanism, and the end cap provides safety gas shut off when replaced. The Portasol® Pro Piezo is a dream to use, and will not let you down.

- 2.4mm double flat tip supplied

Includes Tip Cover.

portasol

1 YEAR WARRANTY

Specifications	TS1310
Operating Time	45 min (approx).
Refill Time	20 sec (approx).
Ignition	Internal Piezo crystal ignitor
Dimensions	178(L) x 22(Dia)mm
Weight	75g without gas.

Cat.	Qty 1+	Qty 3+	Qty 6+
TS1310	$119.00	$106.95	$94.95

TIPS TO SUIT	Cat.	Qty 1+
1.0mm Chisel	TS1311	$23.95
2.4mm Chisel	TS1312	$23.95
4.8mm Chisel	TS1313	$23.95
Hot Air Blow	TS1314	$23.95
Hot Knife	TS1315	$23.95

Portasol® Super Pro Gas Soldering Iron

The Portasol® Super Pro is the big brother of all irons in the range. It features adjustable tip temperature up to 580°C , with equivalent electrical power of between 25 and 125W! 125W may seem somewhat excessive to some. You don't need a V8 to drive around town, but it's nice to know that the power is there when it's needed isn't it? Ignition is achieved with the internal Piezo crystal mechanism, and run time is around 2 hours on a 30 second refill. The stainless steel finished gas tank features a viewing window to keep an eye on fuel level, & the protective end cap also acts as a safety cut off for the gas valve control when replaced. With the various tips available & huge power at hand, no job is a match for the Portasol® Super Pro.

- 2.4mm tip supplied

Includes Tip Cover.

portasol

1 YEAR WARRANTY

Specifications	TS1320
Operating Time	120 min (approx).
Refill Time	30 sec (approx).
Ignition	Internal Piezo crystal ignitor
Dimensions	234(L) x 25(Dia)mm.
Weight	135g without gas

Cat.	Qty 1+	Qty 3+	Qty 6+
TS1320	$139.00	$124.95	$110.95

TIPS TO SUIT	Cat.	Qty 1+
1.0mm Chisel	TS1321	$24.95
2.4mm Chisel	TS1322	$24.95
4.8mm Chisel	TS1323	$24.95
Hot Air Blow	TS1324	$24.95
Hot Knife	TS1325	$24.95

portasol®

A leading brand recognised worldwide. Portasol® products are designed and manufactured in Ireland, to the highest quality standards. Since commencing operation in 1983, they have forged their way into the market with some of the most rugged & reliable gas powered soldering & heating tools in the world. They utilize catalytic combustion (flame tips excluded), which converts the gas flame into infrared radiation. It is a safe, flameless way of heating the tips evenly and continuously. They all use standard butane gas, and have a variety of tips available to support a wide range of applications.

Portasol® Pro Piezo Gas Soldering Tool Kit

This kit contains a Portasol® Pro Piezo Gas Soldering Iron and the following.

- Quality storage case
- 2.4mm double flat tip (TS1312)
- Hot knife tip (TS1315)
- Flame tip (TS1316)
- Cleaning sponge and tray
- Hot air blow (TS1314)
- Hot air deflector

1 YEAR WARRANTY

Cat.	Qty 1+	Qty 3+	Qty 6+
TS1318	$145.00	$129.95	$115.95

Portasol® Super Pro Gas Soldering Tool Kit

Features 120 minute run time, 30 second fill, maximum 580°C temperature and 40 second heat up. This kit contains a Portasol® Super Pro Gas Soldering Iron and the following.

- Quality storage case
- Hot Air Blow
- Cleaning sponge and tray.
- Hot knife tip (TS1325)
- 2.4mm double flat tip (TS1322)
- Hot air deflector
- 4.8mm flat tip (TS1323)

1 YEAR WARRANTY

Cat.	Qty 1+	Qty 3+	Qty 6+
TS1328	$169.00	$151.95	$134.95

BUTANE TORCHES & SERVICE AIDS

GAS TORCHES & COMBOS

Pencil Butane Torch

Pocket sized gas torch for heatshrinking, soldering etc., and uses standard butane gas. Adjustable flame, all metal construction.

- Dimensions: 205(L) x 13(Dia)mm

1 YEAR WARRANTY

Note: Does not self ignite.

Cat.	Qty 1+	Qty 3+	Qty 6+
TS1667	$14.95	$13.45	$11.95

Compact Pocket Size Gas Blowtorch

At only 95mm high, this product is amazing. It is a fully self-contained Butane 1300°C portable blow torch. It has simple press button Piezo ignition, flame control and safety lock. The unit can be recharged with a suitable Butane refill (such as the NA1020). It will take 7g of gas which will give 30 minutes of use at mid setting. Has protective burner cap.

Ideal for:

- Low temp silver soldering
- Heat Shrinking
- Soft soldering ("sweating")
- Hobby use
- Food preparation etc.

Dimensions:

- 95(H) x 55(L) x 26(W)mm
- Weight 45g (dry)

For suitable Butane Gas use NA1020.
For Silver Solder use NS3045.

1 YEAR WARRANTY

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1610	$29.95	$26.95	$23.95

Gas Blow Torch with Butane Gas

Useful for lighting a combustion fireplace, out camping, and a range of handyman and hobbyist functions. Lit with an integrated piezo igniter this unit attaches directly onto the gas canister, so you can just get the job done. You'll get more than 2hrs usage from a single can.

- One-touch automatic piezo ignition
- Ergonomic design
- Adjustable temperature

1 YEAR WARRANTY

Specifications	TH1632
Gas Consumption	100g/hr
Included Gas	Butane 220g
Weight	174g (torch unit)
Dimensions	180(L) x60(W) x 35(H)mm

	Cat.	Qty 1+	Qty 4+	Qty 10+
Gas Blow Torch	TH1632	$34.95	$30.95	$27.95
4 x 220g Spare Gas	NA1021	$7.95	$7.15	

Piezo Ignition Butane Gas Torch

Perfect for silver soldering, brazing, heat treating, heatshrinking, paint removal etc. It's able to produce a flame about 100mm long, so is capable of more than light-duty work. The 64ml tank gives a burn time of 60-70 minutes and uses any butane gas. It also has an adjustable flame, a child-proof piezo ignition button and a stand so you don't knock it over and burn the house down.

- Piezo ignition with safety lock
- 1300°C adjustable flame
- Butane gas refill: NA1020
- Dimensions: 150(H), base 69 x 69mm

1 YEAR WARRANTY

Cat.	Qty 1+	Qty 3+	Qty 6+
TS1660	$39.95	$35.90	$31.90

HEAT GUN

2000W 240V Adjustable Temperature Heat Gun

A powerful 2000W mains powered heat gun with selectable 400°C or 600°C heat settings. Supplied with four head attachments, making it suitable for many DIY applications, including shaping plastic tubing, shrinking heatshrink sleeving, removing paint, softening adhesives, defrosting metal water pipes, and more. Mains powered.

Specifications	TH1609
Temperature / Air Flow	400°C 250L/M / 600°C 500L/M
Dimensions	80(W) x 242(D) x 205(H)mm
Weight	660g

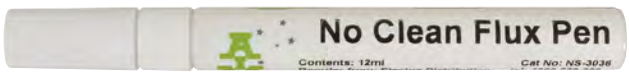
Cat.	Qty 1+	Qty 3+	Qty 6+
TH1609	$29.95	$26.95	$23.95

FLUX

Solder Flux Pen - 12ml

A quick drying, no-clean flux for use when removing or replacing surface mount components. Applying the flux to solder joints will aid re-flow when heating the joint to remove the component, or it can be applied to bare copper or tinned tracks providing excellent solderability.

- Dries in 5 to 10mins
- Handy 12ml pen with chisel tip



	Cat.	Qty 1+	Qty 3+	Qty 6+
12ml Pen	NS3036	$11.95	$10.70	$9.50

Solder Flux Paste - 56g Tub

A mildly-activated agent to provide superior fluxing ability, which enables you to produce high quality soldered joints, and reducing solder waste. The active ingredients in DeoxIT® Rosin Soldering Flux are non-ionic and non-conductive, and ideal for situations when post-soldering cleaning is not possible, and the residue must be highly insulating.

- Non-flammable
- Non-corrosive

	Cat.	Qty 1+	Qty 3+	Qty 6+
56g Tub	NS3070	$17.95	$15.95	$13.95

Tech talk

CHEAP & NASTY BUT EFFECTIVE FLUX

Before solder wire had a core of flux in it you had to use a paste, or a liquid flux. The liquid was Zinc Chloride. It was made by getting some hydrochloric Acid (Muriatic Acid) and dropping zinc into it. The most common source of zinc was bits of galvanised iron. When you dropped the zinc into the acid bubbles would come off. When the bubbles stopped, the zinc had replaced the Hydrogen in the acid. The Hydrochloric acid was then called "killed spirits." The killed spirits was a great flux to solder together, say, brass or copper - or even galvanised iron. Of course, this was potentially dangerous but that was what you did in the good old days!
P.S. don't forget to wear safety goggles if you attempt this.

For next day delivery, or Click and Collect, see page A4

SOLDERING & DESOLDERING

SOLDER

Classic Solder:

- 60% Tin / 40% Lead
- 1.0 & 0.71mm diameters available
- Rosin cored
- Rolls & hobby packs available

500g rolls now available

DURATECH

Size	Hobby Pack	Cat.	Qty 1+	Qty 3+	Qty 6+
0.71mm	15-20g	NS3008	$2.75	$2.45	$2.20
1.00mm	15-20g	NS3013	$2.75	$2.45	$2.20
Size	**Roll Weight**	**Cat.**	**Qty 1+**	**Qty 3+**	**Qty 6+**
0.71mm	200g	NS3005	$22.95	$20.45	$17.95
1.00mm	200g	NS3010	$22.95	$20.45	$17.95
Size	**Roll Weight**	**Cat.**	**Qty 1+**	**Qty 3+**	**Qty 6+**
0.71mm NEW	500g	NS3001	$49.95	$44.95	$39.95
1.00mm NEW	500g	NS3014	$49.95	$44.95	
Size	**Roll Weight**	**Cat.**	**Qty 1+**	**Qty 3+**	**Qty 6+**
0.71mm	1kg	NS3002	$89.95	$80.95	$71.95
1.00mm	1kg	NS3015	$89.95	$80.95	$71.95

Lead-Free Solder:

- 99.3% Tin / 0.7% Copper - Lead Free
- 1.0 & 0.71mm diameters available
- Rosin cored
- Rolls & hobby packs available

DURATECH

Size	Hobby Pack	Cat.	Qty 1+	Qty 3+	Qty 6+
0.71mm	15-20g	NS3086	$2.95	$2.75	$2.30
1.00mm	15-20g	NS3092	$2.95	$2.75	$2.30
Size	**Roll Weight**	**Cat.**	**Qty 1+**	**Qty 3+**	**Qty 6+**
0.71mm	200g	NS3088	$25.95	$22.95	$20.45
1.00mm	200g	NS3094	$25.95	$22.95	$20.45
Size	**Roll Weight**	**Cat.**	**Qty 1+**	**Qty 3+**	**Qty 6+**
0.71mm	500g	NS3090	$54.95	$49.45	$43.95
1.00mm	500g	NS3096	$54.95	$49.45	$43.95

SILVER SOLDER

"Silver" Solder

Far, far stronger than tin/lead solder. The product is basically pure tin with around 4% silver. It contains no lead or cadmium. It melts at 221°C so could be actually soldered with a very hot soldering iron but best results are with a butane type blowtorch. Includes an adequate amount of liquid flux which is basically zinc chloride, water, ammonia and other chlorides. The flux is an eye irritant so safety goggles should be worn.

- 14g solder with 14g of flux
- MSDS supplied
- Wire diameter: 1.16mm approx
- Coil length: 1.8m approx

	Cat.	Qty 1+	Qty 3+	Qty 6+
14g Solder + 14g Flux	NS3045	$29.95	$26.95	$23.95

DESOLDER BRAID

3mm Desolder Braid

A specially treated piece of braid for removing solder from a PCB. Place the braid over the solder and apply soldering iron to efficiently remove solder. 3mm wide, 1500mm long.

	Length	Cat.	Qty 1+	Qty 3+	Qty 6+
3mm Wide	1500mm	NS3020	$3.25	$2.90	$2.60

goot® Desolder Braid

MADE IN

High quality goot® brand gootwick, made in Japan. Contains wash-free RMA flux, conforms to MIL-F-14256F.

- Plastic reels
- 1.5m long

	Length	Cat.	Qty 1+	Qty 3+	Qty 6+
1.5mm Wide	1500mm	NS3026	$5.95	$5.25	$4.75
2.0mm Wide	1500mm	NS3027	$5.95	$5.25	$4.75
3.0mm Wide	1500mm	NS3028	$5.95	$5.25	$4.75

DESOLDER TOOLS

Plastic Desolder Tool

ABS plastic body with strong suction. Very easily cleaned. Total length including tip 195mm.

	Cat.	Qty 1+	Qty 3+	Qty 6+
Tool	TH1860	$11.95	$10.70	$9.50
Spare Tip	TH1861	$3.95	$3.45	$3.15

Metal Desolder Tool

Made of lightweight metal and has strong suction.

- Constant vacuum force
- Cleans itself with each action
- Replacement tip (Teflon)
- Total length incl tip - 195mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Tool	TH1862	$16.95	$14.95	$13.35
Spare Tip	TH1863	$4.95	$4.45	$3.90

Deluxe goot® Desolder Tool

High quality goot® brand desoldering tool. Japanese built quality and a large vacuum chamber for strong suction.

- Large vacuum chamber
- Total length: 330mm

Large model for strong suction.

MADE IN

	Cat.	Qty 1+	Qty 3+	Qty 6+
Tool	TH1856	$31.95	$27.95	$24.95
Spare Tip	TH1857	$8.95	$7.95	$6.95

Solder Sucker & Blower Bulb

A quick & simple bulb type solder sucker that is cheap, compact and effective. Buy two or three and you will always have one handy.

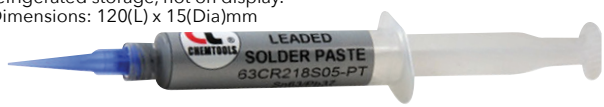
- Approximately 50(D) x 110(L)mm
- Versatile! Suck or blow

	Cat.	Qty 1+	Qty 3+	Qty 6+
Solder Sucker	TH1850	$9.95	$8.95	$7.95

SOLDER PASTE

Classic Solder Paste - 15g SMD Syringe

Ideal for surface mount work and rework, solder paste provides a quick and easy soldering solution. Supplied in a syringe for easy application, simply apply it to the soldering pads, put your components in place and heat it with your soldering iron. Solder paste can go off in storage: we've found a local supplier so you can always be confident that the paste you get will be fresh. 63% tin 37% lead. Solder paste is best kept cool for long life and should be kept refrigerated. Please ask sales staff for this product, as it will be kept in refrigerated storage, not on display.
Dimensions: 120(L) x 15(Dia)mm



	Cat.	Qty 1+	Qty 3+	Qty 6+
15g	NS3046	$14.95	$13.45	$11.95

Lead-Free Solder Paste - 10g SMD Syringe

Lead free solder paste syringes provide a quick and easy soldering solution for your surface mount work and rework. The superior wetting ability of this paste results in bright, smooth and shiny solder joints with lead free alloys. Supplied in a syringe for easy application, simply apply to the soldering pads, put your components in place and heat it with your soldering iron or hot air rework tool.

	Cat.	Qty 1+	Qty 3+	Qty 6+
10g	NS3048	$16.95	$14.95	$13.45

STANDS, CLEANERS & PCB HOLDERS

Soldering Iron Stands

ECONOMY

General-purpose stand for just about any electronics soldering iron. It has a large, thirsty tip-cleaning sponge & pressed metal base.

- Base: 84(W) x 130(D) x 25(H)mm
- Holder: 105(L) x 40(W)mm
- Complete height: 120mm

DELUXE

Ideal for heavier soldering irons. It features a hefty cast iron base with removable sponge tray and twin spiral iron holder.

- Base: 78(W) x 115(D) x 30(H)mm
- Holder: 135(L) x 45(W)mm
- Complete height: 145mm

TS1502 TS1507

	Cat.	Qty 1+	Qty 3+	Qty 6+
Economy Stand	TS1502	$9.95	$8.75	$7.75
Spare Sponge To Suit TS1502	TS1503	$2.75	$2.45	$2.15
Deluxe Stand	TS1507	$16.95	$14.95	$13.35
Spare Sponge To Suit TS1507	TS1508	$3.95	$3.45	$3.15

Solder Stand with Solder Dispenser

Every technician needs one of these on their workbench! It will hold our solder reels and the solder is fed through the guide. It has a handle, so it can easily be carried, and it can be wall mounted to be right there where you always need it.
The base is super heavy so even when the solder reel is nearly empty it will feed ok.

- Shaft diameter is 16mm, will hold our 1kg rolls
- Weight 620g
- Dimensions: 90(L) x 100(W) x 110(H)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Solder Dispenser	TS1504	$24.95	$22.45	$19.95

goot® Soldering Iron Tip Cleaner

MADE IN

The "curly brass" insert doesn't need to be kept wet and cleans without damaging the tip. Uniform iron temperature ensures consistent joint quality and reduces cycle times. It's made from a heavy-duty heat-resistant rubber base that won't slip around on the bench, is static-safe and is also suitable for lead-free solders.

- Supplied with spare insert
- Dimensions-Insert: 45(Dia) x 30(H)mm / Overall: 58(Dia) x 58(H)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Tip Cleaner	TS1510	$17.95	$15.95	$14.35

Soldering Iron Tip Cleaning Paste

A healthy tip makes for easier soldering and better heat transfer. This tip contains powdered solder and non-corrosive flux, so all you need to do is dip your hot soldering tip in, and it will clean and tin in one simple action.

	Cat.	Qty 1+	Qty 3+	Qty 6+
20g Tin	TS1512	$12.95	$11.35	$10.35

PCB Holder

Holds a PCB up to 200 x 140mm in size. The PCB is held in place by spring clamps and can be rotated through 360° at increments of 15°. The base is heavy with well-balanced centre of gravity and built-in rubber feet to ensure you have a firm working surface. Suitable for working with different shaped components, connectors, soldering strips, etc.

- Max holding size: 200(L) x 140(W)mm
- Dimensions: 300(L) x 165(W) x 125(H)mm, 450g

1 YEAR WARRANTY

PCB not included.

	Cat.	Qty 1+	Qty 3+	Qty 6+
PCB Holder	TH1980	$19.95	$17.95	$15.70

Third Hand PCB Holder

Ideal aid for PCB assembly, soldering work, model making, crafts and any application where a third hand is needed. The two strong alligator clips firmly hold parts in place, and six ball joints on moveable arms lock at any angle for the optimum position while you work. A heavy cast iron base ensures added stability.

	Cat.	Qty 1+	Qty 3+	Qty 6+
Third Hand PCB Holder	TH1982	$9.95	$8.95	$7.95

PCB Holder with LED Magnifier

Ideal aid for PCB assembly, soldering work, model making and any application where a third hand is needed. This helping hand has a magnifying glass with LED light that provides continuous light for up to 10 hours. The two strong alligator clips can be adjusted in numerous ways to hold the board as you solder. Heavy cast iron base ensures added stability. Comes complete with a soldering iron holder.

- 2 x White LEDs
- 90(Dia.)mm lens
- 2x lens magnification
- Requires 3 x AAA batteries
- Overall height: 190mm Base dimensions: 114(L) x 75(W) x 29(H)mm

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
PCB Holder with LED Magnifier	TH1987	$24.95	$22.45	$19.95

STANDS, CLEANERS & PCB HOLDERS CONTINUED

LED Magnifying Lamp with Third Hand

The multi-purpose tool offers an excellent all round solution, ideal for working on small to medium PCBs, components, soldering etc. The magnifying lamp with integrated 3rd hand is intended for illuminating work areas and it is equipped with a magnifying glass. This device also comes with a soldering iron stand, alligator clips, soldering wire spool holder, sponge as well as a cleaning ball. Powered by 4 x AA batteries (not supplied).

- Magnifying glass lens size 90mm
- Magnification: 3x
- LED illumination: 16 LEDs
- Neck (for magnifying glass) length: 265mm
- Neck (for alligator clips) length: 250mm
- Sponge size: 30 x 50mm
- Base size: 190 x 170mm

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
LED Magnifying Lamp with Third Hand	TH1989	$49.95	$44.95	$39.95

SOLDERING TOOL KIT

6 Piece Soldering Tool Kit

This kit provides a selection of hand-tools and accessories invaluable for soldering work. There's a Phillips screwdriver, a pair of spring-loaded tweezers, and a heatsink clip for soldering heat-sensitive components. Three assorted double-ended tools are also included for poking, scraping, leg-bending, and even a wire-brush for flux-removal.
A great assortment, supplied in a handy case.

Supplied in a handy case.

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
6 Piece Kit	TH1851	$14.95	$13.45	$11.95

SPRAYS & AEROSOLS

Note: AEROSOLS CANNOT BE SENT BY AIR

Lithium Grease

Long-lasting heavy duty lubricant grease for bearings, sliding mechanisms, battery terminals, chains, sprockets or other moving parts. White in colour so it forms a kind of thick, milky sea in the lubricated area. Reduce friction, protects against corrosion.

MADE IN

	Cat.	Qty 1+	Qty 4+	Qty 10+
400g	NA1015	$9.95	$8.75	$7.75

Dust Remover

Non CFC. Non flammable gas which allows removal of dust from electronic, electrical and optical devices. It does not leave residues and is non toxic and non conductive.

- Much safer than flammable versions sold elsewhere

MADE IN

	Cat.	Qty 1+	Qty 4+	Qty 10+
250g	NA1018	$19.95	$17.70	$15.70

Freezing Spray

Non CFC ozone safe propellant. Instant freeze spray for rapidly cooling components to detect intermittent thermal faults, dry joints and overheating problems.

- Non-flammable

MADE IN

	Cat.	Qty 1+	Qty 4+	Qty 10+
250g	NA1000	$19.95	$17.70	$15.70

Contact Cleaner Lubricant

A blend of non CFC solvents and RF contact treatment oil. Ideal for cleaning and lubricating non-arcing contacts and mechanisms. Can be used for cleaning & lubricating all types of contacts. Safe on most plastics.

MADE IN

	Cat.	Qty 1+	Qty 4+	Qty 10+
175g	NA1012	$11.50	$10.35	$8.95

PTFE Dry Lubricant Spray

This water displacing PTFE lubricant is formulated to provide a dry, lubricating film that is perfect for use with electronic & mechanical assemblies, chains & sprockets, rollers, runners, & power tools etc. It prevents rusting on ferrous metals and helps loosen stiff or sticking parts. The spray can be used in automotive, marine and household environments.

MADE IN

	Cat.	Qty 1+	Qty 4+	Qty 10+
175g	NA1013	$14.95	$13.45	$11.95

Butane Gas

Use it for filling up your gas soldering iron, flame torches, cigarette lighters, etc. Includes five different adaptors, which cover most different gas valves.

- Includes filling instructions

5 adaptors supplied.

MADE IN

	Cat.	Qty 1+	Qty 4+	Qty 10+
150g	NA1020	$4.95	$4.45	$3.95

Circuit Board Lacquer

Non CFC ozone safe propellant. Premium quality flexible coating to protect printed circuit boards from humidity and environmental attack. Special solder through lacquer so previously coated boards can be soldered.

MADE IN

	Cat.	Qty 1+	Qty 4+	Qty 10+
175g	NA1002	$11.50	$10.35	$8.95

Electronic Cleaning Solvent

Non CFC ozone safe propellant. A highly efficient fast drying solvent of high purity. For use on delicate electronic, electrical & precision mechanical assemblies (i.e. tuners, switches, plugs, sockets, relays, pots, etc).

MADE IN

	Cat.	Qty 1+	Qty 4+	Qty 10+
175g	NA1004	$11.50	$10.35	$8.95

Spray-On Contact Adhesive

This pressure-sensitive contact adhesive is in an aerosol can, and bonds to paper, fabric, leather, rubber, foam, vinyl, concrete, metal, in fact almost any surface! No more spills and dribbles from a tube, or sticky screwdrivers (and plastic applicators) from applying glue to a surface. Great for laying innerbond and speaker carpet in/on speaker cabinets etc.

MADE IN

	Cat.	Qty 1+	Qty 4+	Qty 10+
400g	NA1504	$16.95	$14.95	$13.35

SERVICE CHEMICALS & INSULATION TAPES

Electronic Circuit Board Cleaner

Non CFC ozone safe propellant. It may not be obvious, but many circuit problems occur when flux and other contaminents (even finger prints) remain on the PCB causing 'leakage' between tracks. If you work with RF, high impedance (i.e. FET Op-Amps etc), ioniser or other circuits, PCB cleanliness is a MUST. This is a spray that dissolves flux residues & grime leaving the track work and board absolutely clean. We then recommend that you 'tropicalise' the board with circuit board lacquer (NA1002).

MADE IN

	Cat.	Qty 1+	Qty 4+	Qty 10+
175g	NA1008	$11.50	$10.35	$8.95

INOX-MX3 Lubricant

This product is similar to popular water displacement products EXCEPT that it does not contain silicone or kerosene based solvents etc. Indeed, it is so benign it can be used around food. It is also ideal for seized nuts or screws, freeing up hinges, door locks, as a cutting or tapping & other machining agent. As the product is nonconductive, it is ideal for removing moisture from car distributors, switches, potentiometers, solenoids etc. It does not dry or wash out in water. You will be delighted with this product. Two sizes are available:

Cat. NA1022 125g Pump Pack (can be sent by post)
Cat. NA1024 300g Aerosol Spray (can't be sent by post)

MADE IN

NA1024

	Cat.	Qty 1+	Qty 4+	Qty 10+
125g	NA1022	$8.95	$8.05	$7.15
300g	NA1024	$12.95	$11.45	$9.95

Isopropyl Alcohol 99.8% Spray

Isopropyl alcohol is one of the most useful service aids you can have around. It has many of uses such as head cleaning, surface cleaning and prep, contact cleaning, stain removal in the laundry etc. It's also a medical-grade surface disinfectant. Easy to use pump pack spray bottle & dries quickly.

- 99.8% concentration

Cat. NA1066 250ml Aerosol Spray (can be sent by post)
Cat. NA1067 300g Aerosol Spray (can't be sent by post)

MADE IN

NA1067

	Cat.	Qty 1+	Qty 4+	Qty 10+
250ml	NA1066	$6.95	$6.25	$5.55
300g	NA1067	$10.95	$9.45	$8.45

Kleanitize 70% IPA Isopropyl Rubbing Alcohol

70% isopropyl alcohol (commonly known as 'rubbing alcohol' or Isopropanol) is a powerful cleaning solvent, disinfectant, and antiseptic. It is harmless to most plastics, elastomers, or rubbers, and is free of CFCs, chlorinated solvents, and denaturants.

	Cat.	Qty 1+	Qty 4+	Qty 10+
1 Litre	NA1071	$19.95	$17.95	$15.95

Aerosol Butane Gas with Bayonet Fitting 4 Pack

Butane cartridges commonly used in gas stoves, heaters and butane gas blow torches.

- Capacity: 220g each
- Size: 68(Dia.) x 180(H)mm

	Cat.	Qty 1+	Qty 4+
4 x 220g cans	NA1021	$7.95	$7.15

WATER DISPLACING LUBRICANTS

Water Displacing Lubricant Spray Can

Multi-use water displacing and rust preventing lubricant specially formulated for use with mechanical assemblies. Displaces moisture from metal surfaces including: relays, switches,distributors etc. Quickly penetrates rusted and corroded metal parts like nuts and bolts, valves, tools. Also removes grease, chewing gum, adhesives, crayons from most surfaces.

MADE IN

	Cat.	Qty 1+	Qty 4+	Qty 10+
175g	NA1025	$5.95	$5.35	$4.75

WD40 150g Spray Can

Multi-use water displacing and rust preventing lubricant specially formulated for use with mechanical assemblies. Displaces moisture from metal surfaces including: relays, switches,distributors etc. Quickly penetrates rusted and corroded metal parts like nuts and bolts, valves, tools.

MADE IN

	Cat.	Qty 1+	Qty 4+	Qty 10+
150g	NA1029	$7.95	$7.15	$6.35

Tech talk

GOD-LIKE SPRAY CAN BEHAVIOUR

Many people will not go anywhere without a can of WD40. It is a great product and you will find it on this page. It is not the only God-in-a-can product that we stock, however. We also carry a similar product to WD40 called WD Lube (also on this page).
(WD means water displacement).WD-40 is a light hydrocarbon oil with penetration properties useful for moving seized parts. It also works as a rust preventer by leaving a thin layer of oil on steel. WD-40 earned its reputation as a moisture displacer in the days when cars would not start due to condensation under the distributer cap. A further refinement is a product called INOX MX3. It does not contain petroleum or silicone based products and is indeed non-poisonous (the other products are not strictly poisonous, just obnoxious to taste) so much so that you can spray INOX near food. All God-in-a-can products have come a long way from their original automotive use. They have great anti-corrosion and lubrication properties, for example. They continue to find applications all over the place, but with modern ignition systems you can probably safely leave home without a can.

TAPE

PVC Insulation Tape - 20m

High quality insulation tape suitable for wrapping electrical wires.

- Roll length: 20m, 19mm Wide
- Self-Extinguished within 2 seconds after being on fire
- Voltage breakdown: 8.0kV

		Cat.	Qty 1+	Qty 4+	Qty 10+
Black	20m	NM2856	$1.95	$1.75	$1.55

PVC Insulation Tape

Top quality PVC tape.

- Two sizes and six colours available
- 18mm wide

NITTO DENKO

Colour	Length	Cat.	Qty 1+	Qty 4+	Qty 10+
Black	5m	NM2800	$1.25	$1.10	$1.00
Blue	20m	NM2801	$2.95	$2.65	$2.35
Red	20m	NM2802	$2.95	$2.65	$2.35
Black	20m	NM2803	$2.95	$2.65	$2.35
White	20m	NM2807	$2.95	$2.65	$2.35
Yellow/Grn	20m	NM2804	$2.95	$2.65	$2.35

For next day delivery, or Click and Collect, see page A4

TAPE CONTINUED

Insulation Tape - 5m - 6 Pack

Contains one roll each of black, white, red, blue, silver, yellow and green.
- 19mm wide
- Each 5 metres in length
- Pack will vary from picture

	Cat.	Qty 1+	Qty 4+	Qty 10+
Pack of 6	NM2806	$3.95	$3.45	$3.15

Gaffer Tape - 25m

This is not your cheap plastic stuff. It is the genuine cloth-backed tape that you can split with your thumbnail. This waterproof tape is black in colour, low sheen and is the industry standard 48mm wide. Commonly called "100 mile an hour" tape, or "gaffer" tape, it was originally developed for the air conditioning industry.
- It is very adhesive and very strong
- Ideal for taping down leads on stage
- Repairing flexible duct work
- Other public address setups
- Holding things together in general. A must in every toolbox!

		Cat.	Qty 1+	Qty 4+	Qty 10+
Black	25m	NM2810	$16.95	$14.95	$13.45

Nashua Gaffer Tape - 40m

PREFERRED BY THE PROFESSIONALS.
Genuine Nashua brand Gaffer tape. Professional quality 40 metre rolls in both black and silver. Leaves no residue behind and sticks to most clean surfaces, including carpet.
- 48(W)mm x 40(L)m.

Ideal for:
- Outdoor concerts & exhibitions
- Theatre & school productions
- Television studios
- Car racing

		Cat.	Qty 1+	Qty 4+	Qty 10+
Black	40m	NM2812	$37.95	$33.95	$29.95
Silver	40m	NM2814	$37.95	$33.95	$29.95

Genuine "Gaffer" Brand Tape in Hi-Viz Colours - 10m

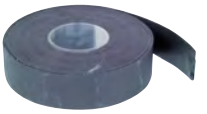
Genuine made-in-USA 24mm wide x 10m roll in Hi Viz fluoro green or hot pink. Matte finish. Ideal for highlighting a piece of equipment, avoiding a hazard, etc.100s of uses.
- Waterproof
- 24mm wide x 10m

NM2813 NM2815

	Cat.	Qty 1+	Qty 4+	Qty 10+
Fluoro Green	NM2813	$15.95	$13.95	$12.45
Hot Fluoro Pink	NM2815	$15.95	$13.95	$12.45

Self Amalgamating Tape - 10m

This insulating tape will "cure" into a single mass (once applied) to help seal and waterproof cable, wires or even pipes. The tape has good corona resisting properties and can be used on high voltage cables. Useful where water and chemical resistance is important.



	Cat.	Qty 1+	Qty 4+	Qty 10+
10m	NM2826	$24.95	$22.45	$19.95

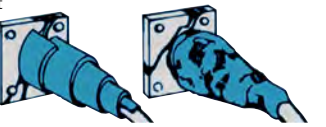
Aluminium Foil Tape - 50m

To be used in any number of situations including RF shielding.
- Foil thickness: 0.04mm
- Raw material: Aluminium foil, Acrylic-based adhesive
- Width 25mm or 50mm
- Application Temp.: -20°C to 120°C

		Cat.	Qty 1+	Qty 4+	Qty 10+
50mm	50m	NM2860	$17.95	$15.95	$14.35
25mm	50m	NM2862	$11.95	$10.70	$9.50

Coax Seal Tape

This versatile material looks like ordinary PVC electrical tape but is actually a handy sealing system that fuses together to form a removable, waterproof seal once it has been applied. The tape has many uses such as waterproofing outdoor coax connections, sealing low pressure vacuum lines, or even as an alternative to heat shrink tubing when access is difficult.
- 12(W)mm x 1.5(L)m
- Used by NASA & US Military



	Cat.	Qty 1+	Qty 4+	Qty 10+
1.5m	NM2828	$12.95	$11.35	$10.35

Double Sided Mounting Tape

Thousands of uses, from mounting PCBs in your project to putting up a poster. Both are double-sided with adhesive.
- 12mm wide
- Two roll sizes

	Cat.	Qty 1+	Qty 4+	Qty 10+
10m	NM2821	$4.95	$4.45	$3.90
25m	NM2823	$3.95	$3.45	$3.15

UGlu® Industrial Glue Strips

Make quick repairs without tools. Simply cut a strip to the size you need, then fix just like double-sided tape to create a permanent, instant bond. Bonds to just about anything - carpet, plastic, canvas, wood, metal, tile, plasterboard, cement, paper, glass, even on rough surfaces. Non-toxic, acid free, no mess. Millions of uses at home, office and workshop. Pack contains eight 75 x 30mm strips.
- Instant bond, permanent hold
- Waterproof and weatherproof
- Removable - Safe for kids to use
- Made in USA

		Cat.	Qty 1+	Qty 4+	Qty 10+
Pack of 8	75 x 30mm	NA1522	$9.95	$8.95	$7.95

Silicone Protective and Repair Wrap - TUFF TAPE

1 YEAR WARRANTY

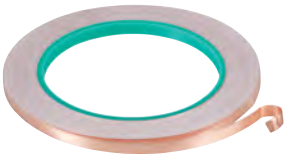
TUFF TAPE is a self-bonding wrap made from a special high quality silicone rubber compound which adheres to itself when wrapped under tension. The tape forms a non-conductive, air and water tight, insulating seal. Hundreds of uses including emergency radiator hose repair, plumbing or garden hose repair, extension cord connections, marine, sport and tool grips, etc. Buy one for the glove box and another for the tool box.
- Won't melt up to +260°C
- Remains flexible down to -50°C
- Tensile strength of 600psi
- Insulates to 400 volts/mil.
- 25mm wide x 3m long

NA2830 NA2832 NA2834

		Cat.	Qty 1+	Qty 4+	Qty 10+
Black	3m	NA2830	$14.95	$13.45	$11.95
Red	3m	NA2832	$14.95	$13.45	$11.95
Clear	3m	NA2834	$14.95	$13.45	$11.95

Adhesive Copper Tape 5mm x 10m

Copper Tape with adhesive backing.
- Solderable
- Repair printed circuit boards
- Create antennas and shielding
- 5mm x 10m



	Cat.	Qty 1+	Qty 4+	Qty 10+
10m Roll	NM2870	$6.95	$6.25	$5.55

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ADHESIVES

Epoxy Bond 34ml

Two part epoxy resin bonds in approximately 4 minutes to give a colourless, permanent bond. Maximum strength after 1 hour. Ideal for rigid plastics, metal, glass, concrete, china & pottery. Supplied in 34ml tubes.

	Cat.	Qty 1+	Qty 4+	Qty 10+
34ml Tubes	NA1510	$9.95	$8.95	$7.95

PlasticWeld Epoxy Putty

After mixing, it forms a polymer compound that can be moulded or used to build up and repair just about anything made from plastic. When cured, it can be sawed, drilled, carved, sanded and painted. Great for rigid & semi-flexible plastic, ABS, PVC & CPVC pipes, automotive trim & bumpers, fibreglass parts, vinyl siding, etc.

- 20-25 minute work life; functional cure occurs in 2-3 hours
- Cures to an off-white colour
- Rated at a tensile strength of 350 PSI
- 57g tube

Note: Does not adhere to polyethylene, polypropylene or some other plastics. Test for adhesion first.

	Cat.	Qty 1+	Qty 4+	Qty 10+
	NA1526	$19.95	$17.95	$15.95

Bondic Liquid Plastic Welding Kit with Case and UV-LED light for Hardening

How many times has glue let us down? Fingers stuck together, broken toys that we just can't fix, having to throw out our stuff because gluing it only made it worse. Not to mention just when we need glue most we discover our 3-month-old bottle is as dry as the Sahara Desert on a hot day. Bondic® is the only product that works where glue fails. It's liquid plastic that only hardens when you need it to. YES it stays liquid and won't dry out like those crazy glues on the market today. Bondic® is a very simple 4-step process (clean, fill, cure and shape) to fix almost anything, saving countless precious items from ending up in the trash before their time. This incredible adhesive is a 100% waterproof and heat resistant tool. A solvent free formula stays liquid until cured with the included UV LED Light. The Bondic® solution dries clear and creates a permanent bond. Bond, build, fix and fill virtually anything in seconds. Bondic® works on: plastic, wood, metal, PVC, steel, rubber, wiring, ceramic, figurines, vinyl, Kevlar, polypropylene, leather and so much more.

Dimensions: 241(L) x 121(W) x 20(D)mm

CURES UNDER UV

	Cat.	Qty 1+
Includes UV LED	NA1530	$44.95

JB Weld SteelStik™ Epoxy Putty

SteelStik™ sets in 3-5 minutes and after 60 minutes, can be drilled, tapped, machined, ground, filed and painted. SteelStik™ cures to a dark grey colour, is rated at a tensile strength of 900PSI and will withstand temperatures up to 148°C. Drinking water safe.

Applications include:

- Automotive & Machine Parts
- Exhaust Systems
- Plumbing
- Stripped Threads
- Rust Damage
- Household Repairs
- Fuel Tanks
- 57g (2oz)

	Cat.	Qty 1+	Qty 4+	Qty 10+
57g	NA1519	$17.95	$15.95	$13.95

Threadlocker Compound - 10ml

Use it to lock and seal threaded fasteners to prevent loosening on vibrating parts such as pumps, motor mounting bolts, gearboxes, etc. Tolerant of oil and other contaminants, it also protects threads from rust and corrosion.

- Ideally suited for fasteners between 6 and 20 mm diameter
- Cures reliably even on stainless steel

	Cat.	Qty 1+	Qty 4+	Qty 10+
10ml	NA1528	$14.95	$13.45	$11.95

J-B Weld Epoxy

Use it as adhesive, plug filler, sealant or electrical insulator. Like metal, it can be formed, drilled, ground, tapped, machined, filled, sanded and painted. It has an open time of about 30 minutes sets in 4-6 hours, and cures fully in 15-24 hours. It's waterproof, petroleum, chemical, and acid-resistant; resists shock, vibration and temperature variations. Bonds almost any combination of iron, steel, copper, aluminium, brass, bronze, pewter, porcelain, ceramic, marble, glass, PVC & ABS, concrete, fibreglass, wood, fabric - just about any porous / non-porous material.

- Mechanical properties (kPa):
  Tensile strength: 27300
  Adhesion: 12400
  Tensile Lap Shear: 7170
- Shrinkage: 0%
- Heat resistance: 260°C

	Cat.	Qty 1+	Qty 4+	Qty 10+
25ml	NA1518	$16.95	$14.95	$13.45

3 Second Super Glue

Ideal for plastics, wood, rubber, glass, metal and ceramics. It sticks in seconds and needs no clamping.

- Supplied in a small tube of 3g

	Cat.	Qty 1+	Qty 4+	Qty 10+
3g	NA1500	$2.25	$2.00	$1.80

Liquid Electrical Tape/ThreadLocker

This liquid can be used instead of insulation tape. Simply brush it on and it will insulate and seal out moisture. Once dry, it is acid & salt resistant and won't crack, peel or harden even under extreme conditions. This is a very versatile product and can be used for such diverse applications as stopping screws from vibrating loose or ropes unravelling. Available in two colours.

	SIZE	Cat.	Qty 1+	Qty 4+	Qty 10+
Black	118ml Can	NM2832	$29.95	$26.95	$23.95
Red	118ml Can	NM2834	$29.95	$26.95	$23.95
Black	28g Tube	NM2836	$19.95	$17.95	$15.95
Red	28g Tube	NM2838	$19.95	$17.95	$15.95

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SCREWDRIVERS

High Quality Jeweller's Screwdrivers

Each screwdriver has a rotating top, larger handle and a strong chrome vanadium tip providing a comfortable finger/palm rest and an easily turned body. These look very similar to those expensive German ones.

Type	Cat.	Qty 1+	Qty 3+	Qty 6+
1.0mm Slot Tip	TD2060	$3.95	$3.55	$3.15
1.5mm Slot Tip	TD2061	$3.95	$3.55	$3.15
2.0mm Slot Tip	TD2062	$3.95	$3.55	$3.15
#000 Phillips	TD2064	$3.95	$3.55	$3.15
#00 Phillips	TD2065	$3.95	$3.55	$3.15

Jeweller's Screwdriver Set

All metal precision screwdrivers for watchmakers, jewellers, modelmaking or just fixing the sunnies. Set of six.

- Slotted: 1.0, 1.2 & 1.6mm
- Phillips: #00, #0 & #1

Cat.	Qty 1+	Qty 3+	Qty 6+
TD2023	$9.95	$8.75	$7.75

6 Piece Insulated Electronic Screwdriver Set

These screwdrivers have ergonomic handles with excellent non-slip grips. The shafts are fully insulated and rated for 1000V. The set contains all the smaller sizes you need for working on electronic gear. Storage case included.

- Slotted: 2mm, 2.5mm, 3mm
- Phillips: #00, #0, #1
- 1000V rated
- TÜV and GS approved
- Case: 192(L) x 130(W) x 26(H)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
TD2026	$29.95	$26.95	$23.95

TOOL & WORKBENCH ACCESSORIES

Tool Magnetiser / Demagnetiser

Magnetised screwdrivers make life easier. This tool has two slots, one which will magnetise and the other to demagnetise. The holes are large enough for the largest of screwdrivers.

- 50(W) x 50(L) x 30(H)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
TD2042	$8.95	$8.05	$7.15

Handy Magnet Strip

You'll find dozens of uses for this innovative magnetic storage system. It can be attached to walls, tables or other surfaces to hold tools, brushes, scissors, key rings or any other object that contains iron.

Tools not included.

Cat.	Qty 1+	Qty 6+	Qty 20+
LM1624	$19.95	$17.95	$15.95

Magnetic Project Work Mat

Holds small metal screws, nuts, and bolts so they don't roll off the desk as you work. No more hunting around for that small screw that fell on the floor as you work.

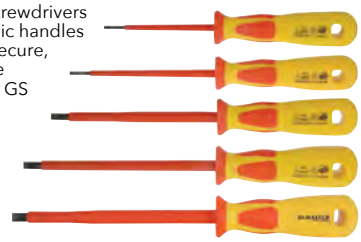
- Dimensions: 254(L) x 203(W)mm

Cat.	Qty 1+	Qty 6+	Qty 20+
TH1867	$14.95	$13.45	$11.95

Electrical Screwdrivers:

This range of trade quality insulated screwdrivers is one of the most comfortable screwdrivers we have ever used. The ergonomic handles have a soft rubber coating for a secure, comfortable grip that you can use for hours on end. All are TÜV and GS approved and rated up to 1kV.

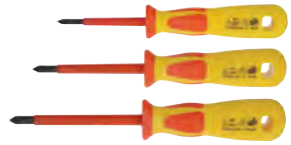
- A size for any application



Slotted

Width	Length	Cat.	Qty 1+	Qty 3+	Qty 6+
2.5mm	75mm	TD2230	$6.25	$5.60	$5.00
3.0mm	100mm	TD2231	$6.75	$6.05	$5.40
5.5mm	125mm	TD2232	$7.95	$7.15	$6.35
6.5mm	150mm	TD2233	$8.95	$8.05	$7.15
8.0mm	175mm	TD2234	$9.95	$8.75	$7.75

Phillips



Size	Length	Cat.	Qty 1+	Qty 3+	Qty 6+
0	60mm	TD2235	$6.75	$6.05	$5.40
1	80mm	TD2236	$7.95	$7.15	$6.35
2	100mm	TD2237	$8.95	$8.05	$7.15

7 Piece Set

A quality set of 7 screwdrivers with storage box. GS & VDE tested & approved to 1000V. With red handles and insulation right to the tip.

- DIN EN 60900.

Flat:
1.2x6.5x150, 1.0x5.5x125, 0.8x4x100, 0.4x2.5x75

Phillips:
#2x100, #1x80, #0x75

	Cat.	Qty 1+	Qty 3+	Qty 6+
7 Piece	TD2022	$39.95	$35.95	$31.95

TEST SCREWDRIVERS

"Smart" Test Screwdriver

- Capacitor check
- Diode check
- Transistor check
- Globe / relay / fuse / speaker / resistor check
- Locating broken wire
- Picks up static radiation of TV or monitor
- Instantaneously checks AC power
- Earth disconnection check
- AC voltages
- DC voltage test up to 250VDC
- Continuity check
- Polarity check 1.5V to 36VDC
- Supplied with comprehensive instructions

Cat.	Qty 1+	Qty 3+	Qty 6+
TD2055	$11.95	$10.70	$9.50

Low Voltage Circuit Tester 6, 12, 24 Volts

Looks like a neon test screwdriver but instead of a blade on the end this tester has a probe and a 28" lead which clips to ground.

- Suitable for 6/12/24 volts for use on cars, trucks, boats, etc.

Cat.	Qty 1+	Qty 3+	Qty 6+
TD2049	$5.95	$5.35	$4.75

SIDE CUTTERS

127mm - Precision Angled Side Cutters

CS

Precision side cutters that are ideal for fine PCB work. They will easily cut leads flush with the board's surface.
The cutters are made from quality tool steel and have soft padded handles that are spring loaded for comfortable long term use.

	Cat.	Qty 1+	Qty 3+	Qty 6+
127mm	TH1897	$14.95	$13.45	$11.95

115mm - Stainless Steel Side Cutters

SS

High quality small side cutters that have thick (2mm) blades and comfort soft plastic handles which are spring loaded.

	Cat.	Qty 1+	Qty 3+	Qty 6+
115mm	TH1890	$13.95	$12.35	$10.95

110mm - Fujiya® Side Cutters

MADE IN

CS

FUJIYA

Beautifully engineered, perfect for cutting super fine wire as well as general workshop use. They aren't just good to look at, they are tough as well and can cut steel wire up to 1.6mm without harm.
The insulated handles are spring loaded for effortless use.

- Blade hardness: Rockwell C Scale 57~61
- Soft grip handle

	Cat.	Qty 1+	Qty 3+	Qty 6+
110mm	TH2332	$34.95	$30.95	$27.95

150mm - Precision Side Cutters

CS

MADE IN

These cutters are made from the same high carbon steel as our TH1885 long nose pliers and are designed for sharp cutting in precision wiring. They have insulated soft-touch handles and a coil return spring for fatigue-free use.

1 YEAR WARRANTY

ENGINEER®

	Cat.	Qty 1+	Qty 3+	Qty 6+
150mm	TH1891	$44.95	$39.95	$35.95

135mm - ESD Safe Side Cutters

CS

FUJIYA

Specifically for ESD work. High quality Japanese designed, Italian manufactured cutters especially for static-sensitive applications.

	Cat.	Qty 1+	Qty 3+	Qty 6+
135mm	TH1922	$34.95	$30.95	$27.95

LONG NOSE PLIERS

150mm - Precision Long Nose Pliers

CS

Precision, slim line long nose pliers that are ideal for working in confined areas. They have serrated jaws so you can get a firm grip on the item you're holding. The pliers are made from quality tool steel and have soft padded handles that are spring loaded for comfortable long term use.

	Cat.	Qty 1+	Qty 3+	Qty 6+
150mm	TH1887	$14.95	$13.45	$11.95

145mm - Stainless Steel Long Nose Pliers

SS

The partner to our TH1890 stainless steel cutters. These have half round smooth gripping jaws perfect for adjusting and bending components, picking up that dropped nut, etc.
Comfortable soft plastic handles which are spring loaded.

	Cat.	Qty 1+	Qty 3+	Qty 6+
145mm	TH1893	$13.95	$12.35	$10.95

110mm - Fujiya Precision Long Nose Pliers

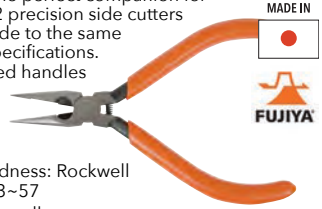
CS

MADE IN

FUJIYA

These are the perfect companion for our TH2332 precision side cutters and are made to the same exacting Specifications.
The insulated handles are spring loaded for effortless use.

- Blade hardness: Rockwell C Scale 53~57
- Soft grip handle



	Cat.	Qty 1+	Qty 3+	Qty 6+
110mm	TH2334	$29.95	$27.95	$23.70

125mm - Precision Long Nose Pliers

CS

MADE IN

These quality pliers are made in Japan from the same high carbon steel that is used to make professional chef's knives. The pliers feature serrated jaws and a box joint to provide a precise action and strong grip. The coil spring ensures smooth, fatigue-free use. Insulated soft touch handles.

1 YEAR WARRANTY

ENGINEER®

	Cat.	Qty 1+	Qty 3+	Qty 6+
125mm	TH1885	$34.95	$31.45	$27.90

SS CS

To avoid confusion we have put a small logo "**SS**" nominating which tool is made out of stainless, and "**CS**" meaning carbon steel.

CUTTERS & PLIERS SET

Stainless Cutter / Pliers Set

SS

Set of five 115mm cutters and pliers for electronics, hobbies, beading or other crafts. Stainless steel with soft ergonomic grips.

Contents:

- Flush cutters
- Long nose pliers
- Flat nose pliers
- Bent nose pliers
- Round nose pliers

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1812	$34.95	$30.95	$27.95

WHEN STAINLESS STEEL IS NOT THE BEST!

We are big fans of stainless steel. We love it in tools, fasteners & many building products. It is not, however, always the best material. Top chefs will tell you, for example, that the best knives are not stainless, they are made out of carbon steel.

Why? Carbon steel is far harder & tougher than stainless. The problem, of course, is that carbon steel will rust if not maintained.

In our search for the best hand-tools, we have decided to stock two very high quality Japanese-made products made out of carbon-steel. They are not cheap but they are for the professional user whose time is money.

Like carbon steel knives, rust is not a problem if used constantly.

They will, however, pay you back every day because they will stand up to heavy wear & tear.

For those who have only occasional use for hand tools, we sincerely recommend stainless steel products.

Are you in the trade?

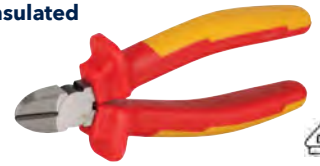
For professionals engaged in electronics & construction-related industries.

trade card jaycar

PLIERS, CUTTERS & TWEEZERS

PLIERS & CUTTERS

155mm (6") Side Cutters - Insulated



This drop forged alloy tool is made to the same standards as our TH1984 combination pliers. It is just as tough and will also cut piano wire up to 1.6mm. This is a quality tool and designed for dedicated wire cutting.
It has comfortable double inset handles.

- 155mm / 6" long

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1985	$24.95	$22.45	$19.95

165mm (6.5") Long Nose Pliers - Insulated

You can see the quality German design in these strong and attractive pliers. They are drop forged to the same standards as the other tools in the range and have the same cutting capacity - up to 4.0mm electrical wire. A very attractive tool with comfortable handles. The high quality manufacture means they can take the work and last for ages. This could be the last pair of long nose general purpose pliers you need to buy!

- 165mm / 6.5" long

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1986	$24.95	$22.45	$19.95

180mm (7") Bull Nose Pliers - Insulated

Strong, Tough & Reliable. These high quality drop forged alloy steel pliers are a professional tool and manufactured to the rigid German DIN standards for electrical safety & mechanical strength. They are for serious tradesmen who need a quality tool. These pliers will cut hard (piano wire) wire up to 1.6mm & soft (annealed copper, aluminium silver etc,) up to 4.0mm. Non slip double inset handles are comfortable to hold.

- 180mm / 7" long

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1984	$24.95	$22.45	$19.95

SPECIALTY PLIERS

180mm (7") - Screw Removing Pliers

This tool is basically designed to remove, by brute force, a hopelessly stripped out head of any type of small non-countersunk screw. The secret is an oval-shaped serrated hole in the end of the plier. You place the plier over the head of the screw, grip and rotate the plier. This system applies a lot more torque to the head of the screw than a drill bit ever could. It's reminiscent of the plier that a dentist used to extract your tooth!! Its Japanese manufacturer has provided a beautifully made and finished product. Suitable for any screw in the range of 2.0 to 5.0mm or so, although it will work on larger screws to lesser effect

- 180mm long
- Soft grip handle

MADE IN

FUJIYA

Cat.	Qty 1+	Qty 3+
TH2330	$29.95	$26.95

75mm (3") Sheet Metal Bending Pliers

Bend sheet metal easily with this heavy duty offset hand tool. Features strengthened rivets and dual layered pitted handle for a firm grip.

- Jaw width: 75mm
- Jaw depth: 30mm
- Overall length: 210mm
- Thin gauge aluminium, brass, etc.

Not suitable for steel over 0.8mm thick.

Cat.	Qty 1+	Qty 3+	Qty 6+
TH2336	$29.95	$26.95	$23.95

TWEEZERS

Anti-Magnetic Precision Tweezers

These are high quality tweezers made from anti-magnetic, anti acid steel. Perfect for handling SMD components, jewels or general electronic components.

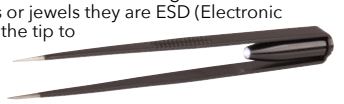
- Length 110mm
- Supplied with protective nylon cap

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1754	$4.45	$3.95	$3.45

ESD Safe Tweezers with LED Illumination

These precision tip tweezers are ideal for picking up tiny objects with the added benefit of a LED light to illuminate the item being handled. Ideal for working with SMD components or jewels they are ESD (Electronic Discharge) safe and have teeth on the tip to ensure reliable grip on items.

- Includes 3 x SR41 batteries
- Dimensions: 155(L) x 15(W) x 10(H)mm



Cat.	Qty 1+	Qty 3+	Qty 6+
TH1761	$9.95	$8.75	$7.75

Stainless Steel Tweezer Set

A set of 4 tweezers, three supplied with vinyl handles, comprising:
1 x self closing pointed type
1 x long curved pointed
1 x long fine pointed
1 x flat spatula type
Approximate length 115mm.

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1752	$8.95	$7.95	$6.95

Stainless Steel Tweezer Set - ESD Safe

A set of 3; duckbill head, angled fine and straight superfine enable you to manipulate surface mount components or other tiny items with ease. ESD coating on main body of tweezers greatly reduces static discharge issues.

- Measures: Angled & duckbill 120mm, superfine 135mm

1 YEAR WARRANTY

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1760	$19.95	$17.95	$15.95

OTHER TOOLS

Inspection Mirror

Low cost inspection mirror. Ideal for looking into hard to get places

- Length: 160mm
- Mirror dia: 24mm

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1872	$4.95	$4.45	$3.90

Forceps (Haemostats)

These clamps are made of stainless steel and can be locked on to the item they are holding. They are 130mm long, so they are ideal to reach into hard-to-get-at places. Also great for holding components etc., whilst soldering.

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1755	$13.95	$12.45	$10.95

SMARTPHONE & GAME CONSOLE TOOLS

LCD Screen Opening Tool

If you're trying to open modern smart devices such as a Tablet or Smartphone, the right tool is essential. This pair of suction-pliers provides pressure to pop open the case, allowing you to get access to the internal electronics and screen. Suitable for screen removal on many smart devices.

- Dimensions: 160mm long

Smartphone not included.

Cat.	Qty 1+	Qty 3+	Qty 6+
TD2121	$9.95	$8.95	$7.95

Opener Tool for Curved Screens Devices

Use this flexible 0.1mm blade to help dissasemble curved screens on Smartphones, Tablets, laptops and other similar displays.

Cat.	Qty 1+	Qty 3+	Qty 6+
TD2138	$9.95	$8.95	$7.95

Tool Set Repair Kit for iPhone®

The tools you need to safely open up your iPhone® or iPad® and put it back together again. Replace cracked screens, dead batteries, scratched back panels and more. Suits iPhone® 3G, 3GS, 4, 4s, 5.

Contents

- 3 x iPhone® mounting panels with screw hole marks for iPhone® 4/4s/5
- 1 x Scraping plastic film
- 1 x Special tool for capacitive screens
- 1 x 0.8 Pentalobe screwdriver (for iPhone® 4/4s/5)
- 1 x 1.2 Pentalobe screwdriver (for iPad®)
- 1 x 1.2 Phillips screwdriver (for iPhone® 3, and parts of iPhone® 4)
- 2 x Guitar pick opening tool
- 2 x Plastic prying tools

Cat.	Qty 1+	Qty 3+	Qty 6+
TD2115	$18.95	$16.95	$14.95

27 Piece Smartphone Repair Kit

A kit containing all the necessary tools you need to fix your Smartphone. This 27 piece Smartphone repair tool kit comes in a compact storage case with a hang tab to make sure that you don't misplace the kit after use. It is not limited to Smartphones either - it is designed to repair iMac®, Mac® air, iPhone®, Samsung®, HTC®, Nokia®, Sony® and many other brands of mobile phone.

Kit includes:

- Aluminium alloy handle
- 18pcs for 4mm bits:
  PH000, PH00, PH0, PH1, SL1.5, SL2.0, SL2.5
  -Torx: T4, T5, T6, T8, T10
  -HEX1.5, HEX2.0
  -Pentalobe 0.8, 1.2, 1.5
  -Tri-Lobe #0
- 2 x Plastic prying tools
- Extension bar
- Guitar pick opening tool
- Suction vacuum opener
- SIM card ejector pin tool
- 2 x Tweezers
- Soldering scraper tool
- Nylon ESD-safe probe with pointed and blade ends
- Case: 190(L) x 130(W) x 26(D)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
TD2118	$29.95	$26.95	$23.70

Gaming Console Tool Kit

Everything you need to get into your console and accessories. It includes tools for pretty much every console and handheld on the market today - Nintendo®, Xbox®, Playstation® etc.

Carry case included.

Contents:

- PH000, PH00, PH0, PH1
- Slotted 2, 3, 4mm
- T4, T5, T6, T8, T10, T15, T20
- TA2, TA2.3
- TRI00, TRI0, TRI1
- Nintendo® & Xbox® security bits
- Xbox® opening tool
- Stainless tweezers
- Ratchet handle and adaptor

Cat.	Qty 1+	Qty 3+	Qty 6+
TD2109	$34.95	$30.95	$27.95

TOOL KITS

35 Piece Electronic Tool Kit with Vinyl Case

A multi-purpose precision screwdrivers tool set with a durable storage case with zipper. The tool set consist of 30 bits, cutters, pliers and a flexible shaft adaptor for those tricky to reach screws, tweezers and screwdriver handle. Ideal for electronic service tradesmen and hobbyists.

Kit includes:

30 pcs assorted bits:

- Slotted:
  SL1.0, SL1.5, SL2.0, SL2.5, SL3.0, SL3.5, SL4.0mm
- Phillips: PH000, PH00, PH0, PH1
- Pozi: PZ0, PZ1
- Torx: T4, T5, T6, T7, T8, T9, T10, T15, T20
- Hex: H0.7, H0.9, H1.3, H1.5, H2.0, H2.5, H3.0, H4.0mm
- Needle nose pliers, diagonal cutters, flexible shaft, stainless tweezers, easy grip screwdriver handle
- Durable zippered storage case
- Case dimensions:
  180(L) x 125(W) x 30(D)mm

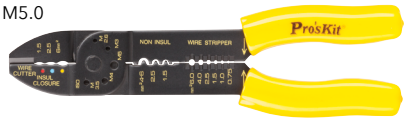
Cat.	Qty 1+	Qty 3+	Qty 6+
TD2117	$49.95	$44.95	$39.95

CRIMPING TOOLS - QUICK CONNECTORS

5 Way Crimping Tool - Auto Type

This crimping tool will do the following:

- Strip wire with diameters 0.75, 1.0, 1.5, 2.5, 4.0 & 6.0mm
- Cut bolts with diameter M2.6, M3.0, M3.5, M4.0 & M5.0
- Cut wire
- Crimp insulated & non insulated terminals



Cat.	Qty 1+	Qty 3+	Qty 6+
TH1828	$9.95	$8.95	$7.95

Automotive Crimp Tool with Connectors

Unlike other automotive crimp pliers, this excellent tool comes with 80 of the most popular automotive connectors and NOT a bunch of junk you will never use. The tool will cut & strip wire, crimp connectors and also cut a range of metric bolts. Every car enthusiast should have one of these.

Included connectors:

- 8 x male & 8 x female blue bullets
- 8 x male & 8 x female red bullets
- 8 x male & 8 x female blue spades
- 8 x male & 8 x female red spades
- 8 x red eye connectors
- 8 x blue butt joiners

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1848	$17.95	$15.95	$13.95

CRIMPING TOOLS - QUICK CONNECTORS CONTINUED

Crimping Tool for Non-Insulated Lugs

A quality tool at a budget price. Solid box joint and crimping dies, comfortable handles and spring-loading make this an easy crimper to use all day. It handles non-insulated lugs from 14-18 AWG and 22-26 AWG and also includes a built-in wire cutter.

	Cat.	Qty 1+	Qty 3+	Qty 6+
185mm long	TH1834	$16.95	$14.95	$13.45

Heavy Duty Ratchet Crimp Tool for Insulated Terminals

Manufactured from quality carbon steel and fitted with hardened and tempered jaws. Crimping pressure is precisely adjustable and a ratchet release lever is fitted to enhance safety. Has easy identification for crimping Red, Blue, and Yellow terminals. Suitable for crimping insulated terminals from 0.5mm to 6.0mm in size.

	Cat.	Qty 1+	Qty 3+	Qty 6+
220mm long	TH1829	$39.95	$35.90	$31.90

Ratchet Crimping Tool for Non-Insulated Lugs

Very high quality with comfortable grip and ratchet mechanism to relieve strain on your hands. Ideal for anyone doing frequent or high volume crimping. The ratchet mechanism holds the crimper closed until complete, with a manual release when needed. The extra-long handle provides exceptional leverage, while the grips provide comfort for your hands. Suits (16AWG to 6AWG) 1.25 to 16mm non-insulated terminals. Ideal for crimping Anderson® plugs up to 50A.

- Dimensions: 280(L) x 55(W) x 18(D)mm (Closed)

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
	TH1847	$39.95	$35.95	$31.95

CRIMPING TOOLS - COAX

Compression Crimping Tool - Universal

A precision crimp tool ensuring correct crimping pressure is applied for reliable, trouble-free compression of BNC, RCA, Min-F and F-type coaxial connectors. Adjustable compression depth that provides desired crimping length.

- Works with RG59 and RG6 coaxial cables

Note: This tool is not suitable for our PP0708 Foxtel Approved F59 Plug.

	Cat.	Qty 1+	Qty 3+	Qty 6+
146mm long	TH1800	$24.95	$22.35	$19.70

Compression Crimping Tool for F-Type Plugs

A compact compression tool designed for our Foxtel approved F-type plug (PP0708). A channel accurately positions the plug, and a spring-loaded clamp holds the cable in position. These features and leverage action of the handle ensure easy F-type compression crimps.

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
143mm long	TH1803	$29.95	$26.90	$23.70

Compression Crimp Tool for RCA / BNC / PAL / F-Type

This crimp tool provides interchangeable dies to crimp RCA, BNC, PAL and F-Type connectors with ease. It's a durable tool that will provide a quality compression connection every time. Metal construction with comfortable grip.

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
152mm long	TH1807	$24.95	$22.45	$19.95

Heavy Duty Coax Crimping Tool

This tool is specifically designed for crimping F, N, BNC, TNC, UHF, ST, SC & SMA connectors onto coax cable for TV and communications applications. It also has adjustable crimp force and 3 hex dies: 2.54mm, 9.12mm & 10.3mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
	TH1832	$34.95	$30.95	$27.95

Hex Ratchet Crimping Tool

Heavy duty ratchet tool designed for crimping F, N, BNC, TNC, UHF, ST, SC & SMA connectors onto RG6, RG58 or RG59 coax cable. It features adjustable crimping force and ratchet mechanism for complete repeatability. Four hex crimping dies: 1.72mm, 5.49mm, 8.23mm and 9.14mm.

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
	TH1833	$39.95	$35.90	$31.90

Ratchet Crimping Tool for F-Type Connectors

A strong, heavy duty tool for crimping F-Type CATV connectors onto RG6 or RG59 coax cable. Ideal for cable TV or RF distributions system installers. The tool features a secure ratchet mechanism for accurate and reliable crimps.

	Cat.	Qty 1+	Qty 3+	Qty 6+
	TH1831	$39.95	$35.90	$31.90

Ratchet Crimping Tool for BNC/TNC Connectors

A heavy duty tool for crimping BNC/TNC 0 connectors onto RG58/59/62 coax cable. The tool features a secure ratchet mechanism for accurate and reliable crimps.

	Cat.	Qty 1+	Qty 3+	Qty 6+
	TH1846	$39.95	$35.90	$31.90

Heavy Duty Terminal Crimper

Commonly used for crimping lug/eye terminals onto heavy gauge power cables. The lever arm action makes for a good solid hex crimp on the terminal. Features a built in rotating die which can be rotated to suit terminals for 6/10/16/25/35/50mm² cable (10AWG-1/0AWG)

- Suits our PT4934 to PT4939 range of eye terminals
- 450mm long

	Cat.	Qty 1+	Qty 3+	Qty 6+
	TH1849	$54.95	$48.95	$43.95

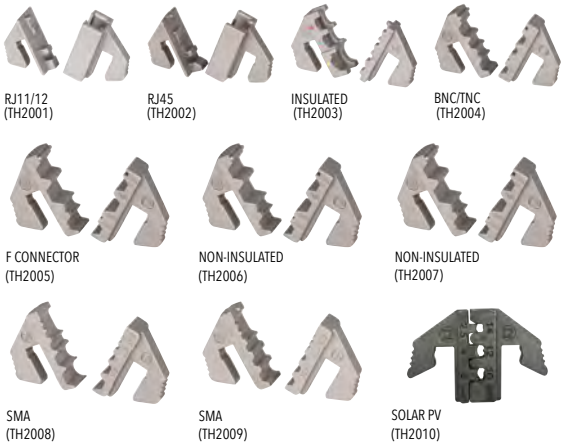
Shop online for your Jaycar products and check out our latest products and promotions on our website.
Visit Our Online Store:
www.jaycar.com.au

CRIMPING TOOLS - MODULAR

Heavy Duty Crimp Tool

This heavy duty, ergonomic crimper allows you to exchange the dies quickly and easily by hand, without the need for a screwdriver! Crimping is made easy with its ratchet mechanism designed for maximum power or quick release. Its ratchet release function allows for easy adjustment to incorrectly placed terminals prior to completing the crimp. The interchangeable dies are available separately so you can buy only the ones you require for each job! An invaluable tool for the workshop or technician's toolkit.

DIES TO SUIT



1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
Heavy Duty Crimp Tool	TH2000	$39.95	$35.95	$31.95
6P6C RJ11/12	TH2001	$22.95	$20.45	$17.95
8P8C RJ45	TH2002	$22.95	$20.45	$17.95
Insulated Terminals	TH2003	$22.95	$20.45	$17.95
BNC.TNC RG58/59/62	TH2004	$22.95	$20.45	$17.95
F Connectors CATV RG6/59	TH2005	$22.95	$20.45	$17.95
Non-Insulated Terminals 26-18AWG	TH2006	$22.95	$20.45	$17.95
Non-Insulated Terminals 20-10AWG	TH2007	$22.95	$20.45	$17.95
SMA/Fibre Optic 1.09-6.48mm	TH2008	$22.95	$20.45	$17.95
SMA/Fibre Optic 1.07-4.52mm	TH2009	$22.95	$20.45	$17.95
PV Connector	TH2010	$29.95	$26.95	$23.95
Deutsch Die AWG 16/18/20	TH2011	$24.95	$22.45	$19.95

6P/8P Modular Crimp Tool

This tool will crimp the following plugs:
6P2C, 6P4C - RJ12, 6P6C - RJ12, 8P - RJ45.
• It also cuts and strips the cable

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1935	$22.95	$20.45	$17.95

4P/6P/8P/10P Modular Crimp Tool

This great tool will cut, strip and crimp flat telephone cable, or Cat5e type cable also. Constructed from high quality carbon steel, it features interchangeable dies and ergonomic design. It also has a brace to lock them closed.

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1936	$54.95	$48.95	$43.95

CAT5 TOOLS

Cat5 Punch-Down Tool / Stripper

LOW-COST

This versatile little tool will strip wire up to 5 to 6.2mm diameter, and doubles as a punch-down tool for 110/88-type terminals, with blade. Made from poly-resin plastic with steel cutters, this lightweight tool could easily fit in the pocket or tool kit.

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1738	$8.95	$7.95	$6.95

Cat5 Punch-Down Tool - Adjustable

It has a turnable body, adjustable impact pressure and a storage compartment within the handle for holding a spare blade. Frame made of polyacetal resin with fibreglass orange handle. Supplied with 88 blade. Spare blades see TH1743 below.

Specifications	TH1740
Impact pressure	Low: 10 +/- 2kg (standard wire)
High	15 +/- 2kg (larger wire)
Length of tool	152mm

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1740	$24.95	$22.45	$19.95

Blades for Cat5 Punch Tools

Suits the punch tool - TH1740. Made from hardened SNCM-21, these blades are both changeable and reversible, and can be changed by hand, no screwdriver necessary. Blade retaining pressure within 4-6 kg. One end of each blade has a cutter for that extra-neat termination, the other end is plain for those "linked" blocks.

	Cat.	Qty 1+	Qty 3+	Qty 6+
110 Krone	TH1743	$17.95	$15.95	$14.35

F CONNECTOR TOOLS

F Connector Seating Tool

This 3 way tool assists in the connection of F type connectors. Includes flaring tool for RG6 and RG59 cable and pre-threading tool. Measures: 60mm diameter

	Cat.	Qty 1+	Qty 3+	Qty 6+
Suits RG6/RG59	TH1883	$11.95	$10.70	$9.50

F-Type / BNC Insertion & Extraction Tool

If you've ever tried to unscrew an F-Type or BNC connector that's been in-place for a while, you know it can be really tough. Sure a spanner might help, but access is usually an issue too. This tool is specifically designed to allow you to insert them with firm torque for a quality connection, and a solid grip to unscrew the most stubborn plug too. Suits F-Type and BNC connectors.

Ideal for the back of a cramped equipment cabinet.

Specifications	TD2000
Thread / Socket	3/8-32 / 7/16 Hex
Dimensions	255(L) x 25(Dia.)mm

1 YEAR WARRANTY

Cat.	Qty 1+	Qty 3+	Qty 6+
TD2000	$14.95	$13.45	$11.95

Product Data:

We have so much data and fact sheets, we cannot fit it all in our catalogue. Check out our website for over 4,000 pages of data!

SHEARS & NIBBLING TOOL

180mm (7") High Quality Stainless Steel Electrical Shears

These precision spring loaded stainless steel electrical shears will cut soft wire up to 22mm² and make light work of cable ties, heatshrink, light hook-up wire and cable braid etc. Thumb operated lock to keep them closed when not in use.

- Ideal for cutting ribbon cable

will cut "presspalm" or elephant hide heavy insulation board

	Cat.	Qty 1+	Qty 3+	Qty 6+
180mm long	TH1757	$9.95	$8.95	$7.95

140mm (5.5") High Quality Electrical Shears

These shears offer impressive cutting ability with finely honed and serrated blades. Great for cutting insulation, heatshrink, spaghetti and light duty hook-up wire.

- Shears feature insulated handles

will cut "presspalm" or elephant hide heavy insulation board

	Cat.	Qty 1+	Qty 3+	Qty 6+
140mm long	TH1758	$6.95	$6.25	$5.50

165mm (6.5") Stainless Steel Cable Shears

This set of cutters has a cutting capability of up to 10mm copper cable. It is constructed from stainless steel and has a hardened long-life cutting edge. For safety and ease of storage, it can be locked in the closed position.

- Stainless Steel & lightweight
- Lockable

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
165mm long	TH1898	$22.95	$20.45	$17.95

300mm (12") Copper Cable Shears

These super heavy duty cutters feature a precision cutting head forged from carbon steel attached to drop forged steel handles for extra leverage. Designed to cut copper cable up to 35mm² you can slice through just about any cable up to 2 gauge. The handles are coated to prevent corrosion and have rubber grips for operator comfort.

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
300mm long	TH1900	$24.95	$22.50	$19.70

Multi Function Cutter/Stripper Tool

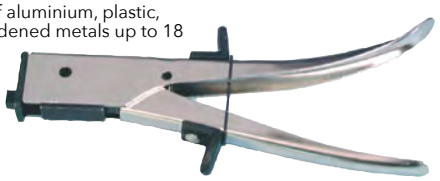
This ingenious 2-in-1 tool is the ultimate in space economy for your toolbox. On the one hand, it is a 6 position wire stripper suitable for 10 AWG to 20AWG insulated wire with a micro-grip jaw at the end. Then, just flip the handles around to turn it into a side cutter and crimper!

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
160mm long	TH1843	$26.95	$23.95	$21.45

Nibbling Tool

Will cut any shape out of aluminium, plastic, copper and other unhardened metals up to 18 gauge. Tool is designed to fit into the palm of your hand for easy use, simply drill a 1/4" hole to start.



	Cat.	Qty 1+	Qty 3+	Qty 6+
	TH1768	$14.95	$13.35	$11.70

CABLE STRIPPERS & CUTTERS

Heavy Duty Wire Stripper / Cutter / Crimper with Wire Guide

Designed for easy wire stripping. The alloy steel can strip all types of cable from AWG 10-24 gauge (0.13 -6.0mm), and the wire guide ensures the correct length is stripped time and time again. It incorporates a precision cutting blade for easy wire cutting. It also features quality crimping jaws. Capable of removing outer insulation from main T & E cable.

- Insulated terminals (1.5 - 6mm)
- Non-insulated terminals (1.5 - 6mm)
- For auto ignition terminals (7-8mm)
- Spring return

The best all round wire tool we've seen for a long time

	Cat.	Qty 1+	Qty 3+	Qty 6+
204mm long	TH1827	$32.95	$28.95	$25.95

Stainless Steel Wire Stripper / Cutter / Pliers

A high quality precision wire stripper and cutter that will strip wire sizes from 0.6mm to 2.6mm. It is spring-loaded with locking jaws, and has soft rubber handles for added comfort.

- Strips stranded wire from 12-24 AWG and solid wire from 10-22 AWG
- Includes wire cutter, pliers and loop hole to bend hooks in wires
- Will also cut steel wires up to 3.0mm

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
164mm long	TH1841	$19.95	$17.95	$15.95

Wire Stripper

Great way to strip all sorts of cable without damaging the conductors. Automatically adjusts to insulation diameter.

- One hand operation
- Spring return

Colour may vary to one shown.

Features a finger guard

	Cat.	Qty 1+	Qty 3+	Qty 6+
	TH1824	$18.95	$16.95	$14.95

Budget Coax Cable Stripper

Strips insulation from any coax cable and ideal if you only need to strip coax occasionally. Simply insert the cable, twist and turn, then use the other end of the tool to remove the inner insulation.

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
	TH1815	$4.95	$4.45	$3.90

Pocket Wire Stripper

Strips anything from 2G to RG6 coax. Easy to use and small enough to take anywhere on the job.

	Cat.	Qty 1+	Qty 3+	Qty 6+
120mm long	TH1817	$17.95	$15.95	$13.95

Rotary Coax Stripper

This handy stripper will strip the outside jacket and inner conductor in one operation.

- Suitable for RG58/59/62/6 and 3C2V 75 ohm cable
- Simply rotate the stripper clockwise around the cable 3 to 6 times. A quality stripper suited to installers

	Cat.	Qty 1+	Qty 3+	Qty 6+
	TH1820	$19.95	$17.95	$15.95

ROTARY TOOLS & ENGRAVERS

Micro Engraver

Engrave your valuables for security or insurance. The tiny diamond coated tip spins at 10,000 RPM so you can personalise tools, sporting gear, toys, security ID on valuables etc. Engraves glass, ceramics, metals and plastics. Batteries and case included.

- Tip is replaceable
- Dimensions: 160(L) x 15(Dia)mm
- Replacement tip sold separately Cat TD2469

	Cat.	Qty 1+	Qty 3+	Qty 6+
Micro Engraver	TD2468	$29.95	$26.95	$23.95
Spare Tip	TD2469	$6.95	$6.50	$5.50

192 Piece Rotary Tool Bit Set

This 192 piece rotary accessory kit comes with a wide variety of components for sanding, engraving, cutting, grinding, and polishing. All parts store neatly in the compact carrying case. This kit is designed to be used with rotary kits that use 3.2mm and 4.8mm diameter shanks.

Includes:

1 x Wrench
16 x Sanding Bands
1 x Rubber Emery Wheel
1 x Felt Wheels
4 x Felt Wheels
12 x Grinding Wheels
2 x Cut Off Wheels Fiberglass
1 x Flap Wheel
1 x Felt Wheel Pointed
3 x Collets
5 x Grinding Wheels With shank
2 x Sanding Shanks
2 x Mandrels For Wheel
1 x Mandrels For Felt Wheels
5 x Diamond Cutters
1 x HSS Cutter
6 x Brush
1 x Polishing Compound
66 x Cut Off Wheels
60 x Sand Papers
1 x Dressing Stone

	Cat.	Qty 1+	Qty 3+	Qty 6+
192 Piece	TD2455	$19.95	$17.95	$15.95

110 Piece 12V Rotary Tool Set

Drill, saw, sand, polish, carve or grind in your workshop or out on the road. 110+ bits and attachments cover every possible task you'll ever need. The rotary tool is rated for 12V at 12,000 RPM. Ideal for hobby or professional use.

Rotary tool:
12VDC, 16W, 12,000 RPM
Attachments:

- Sanding belts 3 x 6mm, 3 x 12mm
- 5 x Sanding Bands: 1/4" x 1/2"
- 6 x Sanding bands: 1/2" x 1/2"
- 4 x Collets: 1.6mm-2.3mm-3.2x2
- 1 x Dressing Stone 1"x 3/8"
- 1 x Felt Wheel Pointed: 3/8" x 3/4"
- 2 x Rubber Emery Wheel
- 4 x Felt Wheels: 1/2" x 1/4"
- 20 x Sand papers
- 2 x Felt Wheels: 1'x1/4"
- 1 x Cloth wheel 1"x 1/8"
- 2 x sanding shanks: 1/4"x1/2", 1/2"x1/2"
- 4 x HSS Twist drills: 1.6mm x 2, 2.3mm x 2
- 3 x Mandrels For Wheel
- 5 x Diamond cutters
- 2 x HSS cutter
- 9 x Grinding wheels with Shank
- 3 x Brush
- 30 x cut off wheels
- 1 x Polishing compound
- 1 x mini engrave

	Cat.	Qty 1+	Qty 3+	Qty 6+
110 Piece	TD2451	$39.95	$35.95	$31.95

210 Piece Rotary Tool Kit with Flexible Shaft

Flexible shafts are particularly useful for porting heads in engines, but have a multitude of other applications where you need to get into a tight space or get more control of the bit. The kit consists of a powerful mains powered 32,000 RPM rotary tool that you can use with numerous attachments in the usual way, plus a 1m long flexible shaft. The flexible shaft attaches in seconds to give extra versatility. Suitable for model making, automotive, workshop, art, jewellery or sculpture. Attachments include:

- Sanding arbours
- Sanding discs
- Drill bits: 2 x 1/16", 2 x 3/32"
- 30mm cut-off wheels
- 20 x 4mm grinding wheels
- P80 sanding belts
- Collets: 2 x 3/32", 2 x 1/8"
- Steel, fibre wire brushes
- Polishing wheels: 12, 25mm
- Paint-removing wheel
- 3/8" collet spanner, arbours, shafts, polishing compound
- Tungsten carbide burrs: 3mm straight, ball profiles
- Diamond coated burrs: 4mm ball, 2mm fine cone taper, 3mm pinecone, 4mm cone
- Grinding stones:
  11 x 8mm tapered bullet
  20 x 4mm wheel
  10 x 4mm wheel
  15 x 10mm cylinder
  12 x 10mm cylinder
  7 x 4mm cylinder
  20 x 10mm bullet

1 YEAR WARRANTY

Specifications	TD2459
Speed	10,000 - 32,000 RPM
Power	135 Watts@240VAC
Dimensions	210(L) x 52(Dia)mm
Shaft Length	1000mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
240VAC 210 Rotary Tool Set	TD2459	$59.95	$53.95	$47.95

ANTI-STATIC PRODUCTS

Conductive Brush

This brush looks very much like a toothbrush. The handle is made from conductive plastic, and the comb from conductive nylon. Use it to clean anything where static is a problem

- Resistivity: - 10KΩ - 10MΩ

	Cat.	Qty 1+	Qty 3+	Qty 6+
178mm long	TH1775	$9.95	$8.75	$7.75

Anti-Static Wrist Strap

Static charges can destroy ICs instantly. Consists of adjustable hook and loop wrist strap, coiled lead and banana plug/alligator clip.

	Cat.	Qty 1+	Qty 3+	Qty 6+
Expands to 1.8m long	TH1780	$14.95	$13.45	$11.95

Anti-Static Wrist Strap

Similar to the unit above, this strap has an extra long coiled lead of 3m/10ft extender. This makes it ideal for moving about your workbench without having to unclip yourself to do so. An elasticised wrist strap is also included, along with banana plug/ alligator clip.

Colour may vary

	Cat.	Qty 1+	Qty 3+	Qty 6+
Expands to 3.0m long	TH1781	$19.95	$17.95	$15.95

Anti-Static Field Service Mat / Bag

The mat folds out to a work area of approximately 600 x 600mm. At one end there are 2 pouches, and a ground lead and wrist strap are included. A very useful tool.

- Pouch size approx: 200 x 300mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
600 x 600mm	TH1776	$44.95	$39.95	$35.95

GLUE GUNS & TOOLS

GLUE GUNS

Large Glue Gun - 100W

Great for quick and easy low stress repairs to timber, cardboard, paper and many household materials. It is fast, easy and simple to use with trigger controlled glue feed.

- Mains powered
- Requires 11mm diameter glue sticks (2 supplied)

Note: For intermittent use only.
Not for production use

GLUE STICKS FOR LARGE GUN

- Dimensions: 11mm Dia. x 100mm long
- Suits TH1999 gun

	Cat.	Qty 1+	Qty 3+	Qty 6+
Large Glue Gun - 100W	TH1999	$19.95	$17.95	$15.95
Glue Sticks Pkt 6	TH1995	$4.95	$4.45	$3.90
Glue Sticks Pkt 45 approx	TH1996	$17.95	$15.95	$14.35

Mini Glue Gun - 30W

A glue gun is a handy tool to have around the house. It's fast, easy and simple to use with trigger controlled glue feed. Suitable for toys and models, decorations, furniture, woodwork, cardboard, etc.

- Mains powered
- Requires 7mm diameter glue sticks (2 supplied)

Note: For intermittent use only.
Not for production use

GLUE STICKS FOR MINI GUN

To suit the mini glue gun.

- Dimensions: 7mm dia. x 100mm long
- Suits TH1997 mini gun

	Cat.	Qty 1+	Qty 3+	Qty 6+
Mini Glue Gun - 30W	TH1997	$12.95	$11.35	$10.35
Glue Sticks Pkt 6 for Mini Gun	TH1991	$3.95	$3.45	$3.15
Glue Sticks Pkt 50 for Mini Gun	TH1994	$9.95	$8.75	$7.75

10W Hot Glue Gun with Colour Print

A mini glue gun to have in the workshop, crafting area, toolbox or office. After a short warm-up time, simply squeeze the trigger to control the glue feed. A handy stand swings out to help avoid the hot end from touching the bench. Suitable for toys and models, decorations, furniture, woodwork, cardboard, etc. Mains powered and supplied with two 7mm glue sticks to get you started straight away.

Note: For intermittent use only.
Not for production use.

	Cat.	Qty 1+	Qty 3+	Qty 6+
10W	TH2050	$12.95	$11.45	$9.95

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LOCK PICKING

24 Piece Lock Picking Kit with Practice Padlock

NEW

Learn how to pick padlocks and challenge your mates to see who can pick the lock the quickest with this 24-piece lock picking kit with practice padlock. This handy toolkit includes 20 x stainless steel single lock picks of different sizes, 3 x Z-shaped tools to maintain constant tension on the pins, and an auto tension tool, all contained in a zip-up carry case. Instructions and a see-through practice padlock is also included to get you started.

- Transparent practice padlock with 2 keys
- Stainless steel 304
- Included User Guide

Cat.	Qty 1+	Qty 3+	Qty 6+
TH2200	$39.95	$35.95	$31.95

2 Piece Cylinder Practice Locks

NEW

Combine with a lock picking kit to learn how to pick cylinder type locks. Two different style cylinder practice locks are supplied, which are see-through so you can see the internal pins and springs in action. Challenge your mates to see who can pick the locks the fastest.

- Transparent locks
- 2 keys for each lock
- Plastic storage case for each lock

Cat.	Qty 1+	Qty 3+	Qty 6+
TH2202	$19.95	$17.95	$15.95

Note: These kits are intended for lawful purposes only including hobby (Locksport) or private use.

SAFETY GLASSES

Wrap-Around Clear Safety Glasses

Lightweight, durable and comfortable fit. Completely clear design with folding arms.

Dimensions:
180(W) x 160(D) x 50(H)mm

Cat.	Qty 1+	Qty 4+	Qty 10+
TH3002	$3.95	$3.55	$3.15

Safety Glasses with LED Lights

Protect your eyes and shine a light on what you're working on with these Safety Glasses with LED Lights. An LED on either side can be individually switched and swivelled for the ideal position. The arm lengths can be adjusted up to 22mm. The arms fold in for easy storage. Each LED is supplied with 2 x CR2032 button cell batteries.

Dimensions: 160(W) x 160(D) x 60(H)mm

Cat.	Qty 1+	Qty 4+	Qty 10+
TH3000	$9.95	$8.95	$7.95

SPECIALTY SCREWDRIVERS

Keyring Screwdriver Set

This tiny key-size screwdriver set consists of a 5mm slotted driver, #2 Phillips driver and is small enough to be carried on your key ring, yet strong enough to loosen all but the toughest general purpose screws without damage. The drivers are made from chrome-vanadium steel and have a forged handle section that allows plenty of pressure to be applied to the job. Length 55mm.

Cat.	Qty 1+	Qty 3+	Qty 6+
TD2012	$4.95	$4.45	$3.95

2-in-1 Reversible Screwdriver

A handy screwdriver to keep in your pocket so you always have one in reach as you work around the home, office, or workshop. The long, slim shaft can be reversed between Phillips or flathead.

Dimensions: 135(L) x 15(Dia.)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
2-in-1	TD2530	$5.95	$5.35	$4.75

DRIVERS & BIT SETS

7 Piece Hex Nut Driver Set

A useful set of hex nut drivers with deep sockets that allow a generous length of thread to protrude through the nut you are tightening. Sizes supplied are M3, M3.5, M4, M4.5, M5, M5.5, and M6. A plastic storage pouch keeps the set together. A quality Japanese product.

Hex (Allen) Bits:
- M3 Bolt/Nut
- M3.5 Bolt/Nut
- M4 Bolt/Nut
- M4.5 Bolt/Nut
- M5 Bolt/Nut
- M5.5 Bolt/Nut
- M6 Bolt/Nut

MADE IN

Cat.	Qty 1+	Qty 3+	Qty 6+
TD2339	$39.95	$35.95	$31.95

Blank Hex Driver For Individual Screw Bits

Use this driver with the bits supplied in our TD2035 bit sets. It will accept any hex bit in our range and features non-slip rubber handle with magnetic chrome vanadium 50mm long shaft.

Length	Cat.	Qty 1+	Qty 3+	Qty 6+
160mm	TD2032	$6.95	$6.25	$5.50

The Power Driver Bit Set - 32 Pieces

The set consists of 32, yes 32 of the driver bits that you don't normally see. You don't get any slotted, Phillips or Pozidriv™ bits.
- 4 x Tri - wing, size 1, 2, 3, 4
- 9 x Torx (tamperproof), size T8, T10, T15, T20, T25, T27, T30 and T35
- 4 x Pin drive (snake), size 4, 6, 8 and10
- 6 x In - Hex (allen), *metric, size 2, 2.5, 3, 4, 5 & 6
- 6 x In - Hex (allen), *imperial size 5/64", 3/32", 7/64", 1/8", 9/64" and 5/32"
- 3 x Torque Set, size 6, 8 and 10

With this you get a hex driver with magnetic retainer, all in a nifty plasticy - rubber holder that is smaller than a deck of cards! (67 x 45 x 30mm).
- Tamperproof Torx works as normal Torx as well.
- Tamperproof In - Hex drive type

	Cat.	Qty 1+	Qty 3+	Qty 6+
32 Pieces	TD2035	$19.95	$17.95	$15.95

100 Piece Driver Bit Set

High Impact S2 Steel

The ultimate driver bit set includes:
- 1 x magnetic bit holder
- 1 x square to hex socket driver 50mm
- 1 x square to hex socket driver 25mm
- 1 x square to hex bit adaptor

Driver bits:
- Phillips # 0, 1, 2 (x5) & 3
- Pozidriv™ # 0, 1, 2 (x5) & 3
- Square drive # 0, 1, 2 & 3
- Slotted 3, 4, 4.5, 5, 5.5, 6, 6.5, 7 & 8mm
- Pin drive (snake) # 4, 6, 8 &10
- Torque Set # 6, 8 & 10
- Torx T8, T10, T15, T20, T25, T27, T30, T40 & T45
- Tamper proof Torx (Metric) T8, T10, T15, T20, T25, T27 & T30
- Hex (Allen) Metric 1.5, 2.0, 2.5, 3.0, 4.0, 5.0, 5.5, 6.0 & 8.0mm
- Tri-Wing # 1, 2, 3 & 4
- Clutch drive # 1, 2 &3
- Hex (Allen) Imperial 1/16, 5/64, 3/32, 7/64, 1/8, 9/64, 5/32, 3/16, 7/32 & 1/4"
- Spline drive M5, M6 & M8
- Tamper Proof Allen (Metric) 2.0, 2.5, 3, 4, 5 & 6mm
- Tamper Proof Allen (Imperial) 5/32, 9/64, 1/8, 7/64, 3/32 & 5/64"
- Wing nut driver
- All in a snap lock case with clear markings to show where each bit rests

Note that commonly used driver bits are supplied in greater numbers.

Cat.	Qty 1+	Qty 3+	Qty 6+
TD2038	$29.95	$26.95	$23.95

ELECTRIC SCREWDRIVER SETS

Rechargeable Lithium-Ion Screwdriver with Bits and Case

Ideal for makers, technicians, and other professionals who are assembling or repairing phones, watches, laptops, drones, and more. Integrated LEDs shine light on what you're working on, and five LEDs at the other end of the screwdriver indicate the power remaining. A tool magnetiser/demagnetiser is included to enable the bits to hold onto the screws, and a handy magnetic work mat prevents tiny nuts and bolts from rolling off your workbench while you work. 55 x S2 tool steel bits, including tamperproof types, are supplied, along with an extension rod, and handy carry case.
- 150 RPM no load speed

28mm Bits Included:
- Torx: T2, T3, T4, T5, TR6, TR7, TR8, TR9, TR10, TR15, TR20
- Hex: H0.7, H0.9, H1.3, H1.5, H2.0, H2.5, H3.0, H3.5, H4.0
- Phillips: PH0000, PH000, PH00, PH0, PH1, PH2
- Pentalobe: 0.8, 1.2, 1.5
- Tri-Wing: Y0.6, Y1.0, Y2, Y2.5, Y3.0
- Triangle: 2.0, 2.3, 2.5, 3.0
- Slotted: 1.0, 1.5, 2.0, 2.5, 3.0, 3.5
- U type: 2.0, 2.6, 3.0 SQ: S0, S1, S2

46mm Bits Included:
- Phillips: PH0, PH2
- Slotted: 2.5
- Hex: H2.0, H2.5

RECHARGEABLE

Cat.	Qty 1+	Qty 3+	Qty 6+
TD2510	$89.95	$80.95	$71.95

42 Piece Cordless Screwdriver Set

This small yet powerful electric screwdriver is perfect for small electronics work. Includes spare common bit sizes, mains charger and a convenient carry case.

RECHARGEABLE

Specifications	TD2500
No Load Run Time	42 minutes
Voltage	3.6V
Charge Time	3 hours (from flat)
Included Bit Sizes	Phillips: #0 (x2), #1 (x2), #2 (x3), #3 Flat: 3, 4, 4.5, 5, 5.5, 6, 6.5, 7, 8 Torx: T8, T10, T15, T20, T25, T27, T30, T40, T45 Pozi: PZ0 (x2), PZ1(x2), PZ2(x2), PZ3 Hex: H1.5, H2, H2.5, H3, H4, H5, H5.5, H6, H8

Cat.	Qty 1+
TD2500	$29.95

For next day delivery, or Click and Collect, see page A4

SCREWDRIVERS & DRIVER BITS

PRECISION DRIVER SETS

15 Piece Micro Driver Set

This handy set comes with all those microscopic fasteners we come across in modern electronics. The ergonomic handles are colour coded and they come in a sturdy storage case.

- Slotted: 1mm, 1.4mm, 1.8mm, 2.4mm
- Phillips: #000, #00, #0, #1
- Torx: T5, T6,T7, T8
- Hex: 1.5mm, 2mm, 2.5mm
- Drivers: 105mm long
- Case size: 192(L) x 130(W) x 26(H)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
15 Piece	TD2069	$29.95	$26.95	$23.95

22 Piece Long Bit Screwdriver Set

Tackle a wide range of fastening scenarios using our compact screwdriver set comprising a selection of popular slotted, Phillips, Star and TRI bits, packed away neatly inside a handy storage case.

- Slotted: SL1.5, SL1.7, SL2.0, SL3.0 and SL4.0.
- Phillips: PH000, PH00, PH0, PH1 and PH2
- Star: T5, T6, T7H, T8H, T9H, T10H, T15H and T20H
- TRI: 2.5, 3.0
- Pentagonal: 1.6
- Pin drive (snake): SP2

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
22 Piece	TD2114	$39.95	$35.95	$31.95

48 Piece Screwdriver Set with Carry Case

An impressive set of 48 precision driver bits, including tamperproof types, to repair Smartphones, games consoles, and other electronic gadgets. The bits are made from quality S2 tool steel and hardened to 58 HRC. When not in use, the magnetic bits hold in place in the handy storage container, which has each part individually labeled so you can quickly choose the right bit you need. Suitable for hobbyist or professional use.

Bits Included:

- Point: 0.8
- Pinhead Phillips: 2.5
- U type: U2.6, U3.0
- SQ: S0, S1, S2
- Triangle: 2.0, 2.3, 3.0
- Pentalobe: 0.8, 1.2, 1.5
- Phillips: PH000, PH00, PH0, PH1
- Slotted: 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0
- Torx: T2, T3, T4, TR5, TR6, TR7, TR8, TR9, TR10, TR15, TR20
- Hex: 0.7, 0.9, 1.3, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0
- Tri-Wing: Y0.6, Y2.0, Y2.5, Y1
- Aluminium Alloy Handle
- Case dimensions: 168(L) x 65(W) x 15(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
48 Piece	TD2134	$29.95	$26.95	$23.95

5 Piece Torx Set

Easy to use colour coded Torx screwdrivers in a plastic case. Each screwdriver has a swivel head for easy use. Blade length is 20mm and torx sizes are T6, T7, T8, T9 & T10.

	Cat.	Qty 1+	Qty 3+	Qty 6+
5pc	TD2070	$12.95	$11.35	$10.35

6 Piece Precision Tamperproof Torx Set

A quality set of chrome vanadium drivers consisting of T7, T8, T9, T10, T15 and T20. All drivers are 145mm length & presented in a felt-lined plastic case.

	Cat.	Qty 1+	Qty 3+	Qty 6+
6pc	TD2021	$19.95	$17.95	$15.95

12 Piece Keycase Mini Driver Set

12 mini bits & driver in a key-sized storage case.

- Slotted: 1.5, 2, 5mm
- Phillips: 0, 00, 000
- Torx: T5, T6, T7, T10
- TN8, Hex 2.5mm
- Case size: 95(H) x 60(W)mm

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
12 Piece	TD2105	$24.95	$22.45	$19.95

73 Piece Multifunctional Screwdriver Set with Carry Case

A professional multifunctional screwdriver kit with over 60 bit attachments to open all kinds of electronic devices. It has all the bits you'd expect to find, such as Slotted and Phillips, but it also has tri-wing, pentalobe, torx, u-shape, and other tamperproof types. The handy storage case also contains various opening tools, tweezers, a suction cup, and a flexible attachment so you can reach those hard to get screws. A must-have kit for any technician or serious hobbyist.

- Quality precision bits made from 1mm S2 tool steel
- Storage case
- Opening tools
- Flexible attachment
- Tweezers
- Suction cup

This is the ultimate minature screwdriver/ socket set for the dedicated craftsman

S-2 H4 x 28mm Bits:

Hex: H0.9, H1.3, H1.5, H2.0, H2.5, H3.0, H3.5, H4.0, H4.5, H5.0, H6.0
Torx: T2, T3, T4, T5, T6, T7, T8, T9, T10, T15, T20
Slotted: 1.0, 1.5, 2.0, 2.5, 3.0, 3.5
Phillips: 1.0, 1.5, 2.0, 2.5, 3.0, 3.5
Tri-Wing: Y0.8, Y2.0, Y2.5, Y3.0
Pentalobe: 0.8, 1.2, 1.5, 2.0
Square: SQ0, SQ1, SQ2
Triangle: 2.0, 2.3
Standoff: 1.5

S-2 H4 x 45mm Bits:

Phillips: 2.5, 3.5
Slotted: 2.0
Torx: T10
U-Shaped: U2.6
Tri-Wing: Y2.5
Triangle: 2.3

Socket H4 x 28mm Bits:

Hex: M2.5, M.0, M3.5, M4.0, M4.5, M5.0, M5.5
Torx: G3.8, G4.5

	Cat.	Qty 1+	Qty 3+	Qty 6+
73 Piece	TD2136	$49.95	$44.95	$39.95

Tell a Friend

If you have a technical friend or someone who may be just interested in some of the products we stock, tell them to email their address details to:

CATALOGUE DEPARTMENT - JAYCAR:

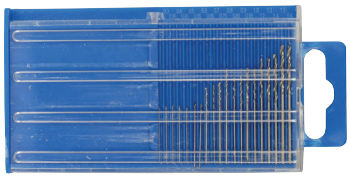
catalogue@jaycar.com

DRILLS & DRILL SETS

20 Piece Micro Drill Set 0.3 - 1.6mm

20 micro drills in an indexing storage case, ideal for drilling wood, composites, plastic or soft metals. Indexed case enables removal of the bit you want without the risk of spilling them all over the place.

- Sizes:
  0.3, 0.35, 0.4, 0.45, 0.5, 0.55, 0.6, 0.65, 0.7, 0.75, 0.8, 0.85, 0.9, 0.95, 1.0, 1.2, 1.3, 1.4, 1.6, 1.6mm
- Case size:
  130(L) x 70(H) x 8(D)mm



	Cat.	Qty 1+	Qty 3+	Qty 6+
20 Piece	TD2406	$12.95	$11.35	$10.35

31 Piece Mini Tap & Die Set

This 31 piece set is for the ultra small screws found in electronics. The kit consists of 9 metric screw cutting dies: 1.0, 1.1, 1.2, 1.4, 1.6, 1.8, 2.0, 2.2 & 2.5mm types in high speed steel and 18 equivalent taps in the same sizes above but with a taper and a plug version of the tap. There are 2 die liners to accommodate the smaller dies in the stock supplied. You will love this rare product. Supplied in a see-through plastic case which securely holds all parts.

- Dimensions: 83(W) x 153(L) x 12(D)mm

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
31 Piece	TD2443	$74.95	$67.45	$59.95

Pin Vice

A handy addition to any tool case. All metal construction with two internal collars. The head rotates freely making it ideal for drilling delicate PCBs or plastic cases.

	Cat.	Qty 1+	Qty 3+	Qty 6+
	TH1772	$13.50	$11.95	$10.70

Spiral Drive Drill / Driver

The unit consists of a collet-type chuck and handle with a spiral shaft. Pushing the handle towards the job causes the collet to rotate. This would enable a drill (or screwdriver bit for that matter) to very gently and slowly rotate. It is ideal for very fine work and does need some practice to perfect your technique.

- Includes 2 pin vice collets: 0.3-1.0mm & 1.8-2.6mm
- Also 3 small drill bits in tubular case
- Dimensions: 180(L) overall (uncompressed) x 15(Dia.)mm

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
180mm long	TD2089	$25.95	$22.95	$20.45

Engineer Scale Ruler with Useful Information

A multifunction ruler for the electronics designer that includes several relevant charts and diagrams like angle gauges, IC pin spacing tables and chip resistor/capacitor package sizes. Gold plated printing on genuine circuit board material will ensure a long life. It also functions as a regular ruler! Angle Gauge, IC Spacing Tables, SMD Resistor/Capacitor Sizes, and Drill Diameter Reference.

- R-4 Gold Plated

	Cat.	Qty 1+	Qty 3+	Qty 6+
25cm long	TH2520	$7.95	$7.15	$6.35

PCB Drill Chuck

This chuck will allow you to use mini drills from 0.6mm up on your normal drill / cordless drill / power screwdriver orscrewdriver which accepts standard hex bits.

	Cat.	Qty 1+	Qty 3+	Qty 6+
	TD2010	$11.95	$10.45	$9.45

4 Piece Countersink Set

The easy way to deburr or countersink. Simply drill hole, insert tool with appropriate bit, and turn for a countersunk angle of 90°. Bits include 12, 16 and 19mm - all hardened carbon steel.

	Cat.	Qty 1+	Qty 3+	Qty 6+
4 Piece	TD2027	$13.95	$12.35	$10.95

Universal Drill Press Stand

Convert your standard power drill or rotary tool into a drill press with this adjustable stand. Substantially cheaper than purchasing a full drill press, the stand still has all the necessary features expected in a full size press. It includes separate adjustments for limiting press depth and drill height so you can change drill position with minimal risk of over-drilling into the stand. The drill collar can be adjusted to suit a variety of tools. Heavy duty cast metal base and frame provides excellent stability.

- Allen key supplied for tightening drill collar
- Drilling depth: Up to 60mm
- Maximum collar diameter: 43mm
- Minimum collar diameter with insert: 35mm
- Dimensions:
  497(H) x 350(W) x 160(D)mm

Note: Drill not included

	Cat.	Qty 1+	Qty 3+	Qty 6+
	TD2463	$49.95	$44.95	$39.95

Sheet Metal Bender - Pan Break Style (Vice Break)

This unit sits in the jaws of your bench vice (100mm+ recommended). It retains itself in the vice with strong recessed magnets. One half consists of the familiar blade that bends the sheet metal. The other half in the 90 degree recess that the blade pushes into. By carefully positioning the sheet, you can perform a perfect 90 degree bend as good as a workshop! The blade is segmented, just like a workshop pan break, so that you can make partial bends. With a little practice, you will be able to fabricate brackets, small boxes & other metal assemblies like a pro. Warning: This unit is not particularly cheap. It is, however, very well made. It is cast steel with tool steel pressing components. You need it to be sturdy, otherwise it would break or flex. It will, literally, last a lifetime. Will fold sheet up to 125mm, however there are 3 x press segments 2 x 50mm, 1x25mm and these are independently removable by Allen head set screws. Depending on the width of the material you could easily bend steel strips up to 4mm thick and 25mm wide. Aluminium should not be a problem up to 4mm thick & 100mm wide, depending on your vice.

- Dimensions:
  125(L)x30(W)mm both halves

p.A36 metal bending pliers

	Cat.	Qty 1+	Qty 3+	Qty 6+
	TH1763	$79.95	$71.95	$63.95

BENCH VICES & ACCESSORIES

Mini Bench Vice

This sturdy lightweight vice will clamp to surfaces up to 1" thick and hold material up to 2" thick. This handy tool is ideal for hobby work or as a light duty workshop bench vice. Made from strong, lightweight aluminium that won't rust or corrode, the vice will be a useful addition to anyone who needs a third hand!

- Vice jaws are 63.5mm wide and will open to more than 50mm

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1764	$17.95	$15.95	$13.95

270° Rotation Clamp Vice

Rotate the head through 270° to make your work easier. The base will clamp to any bench or table up to 55mm thick and the 40mm jaws will take a job up to 58mm in size. Once in position, the head is easily fixed in position with a quick release lever.

- Base: 115(W) x 94(D)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1769	$35.95	$31.95	$27.95

Vacuum Bench Vice - 75mm Jaw

This quality vacuum vice is made from hard-wearing diecast aluminium. The vice consists of three-pieces; a vacuum base, ball joint clamp and a 75mm opening jaw with removable soft rubber jaw covers. The 'V' grooved jaws are ideal for holding cylindrical and irregular shapes, making it well suited to small bench jobs such as model building, jewellery making and general PCB/chassis work. The multi-positional ball swivel allows the jaws' working position to be varied through a full 360° axis.

- Stands approximately 160mm tall

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1766	$39.95	$35.90	$31.90

FISH TAPE

Wire Draw Fish Tape

A fish tape is a tool that's used to draw wire and cable through wall cavities or conduit. Instead of a clumsy method of using, say a length of fencing wire and hours of frustration, this handy tool uses 15m of flat, rigid spring steel with a built-in cable eye on the end to making running cables easy. You can easily direct the rigid wire exactly where you need to, and when not in use the tape rolls back up into its own case for easy storage. No electrician, data cable, antenna, home theatre or security installer should be without one.

- Made with Flexible High-Strength Steel in Durable Plastic
- Rust and Corrosion Resistant
- No Kink Design
- Length: 15m

Electrical safety warning:
Conduits, wall, floor and roof cavities contain live electrical wiring.
DO NOT use this device anywhere around live electrical wiring. Ensure all electrical power is turned off and disconnected from the mains before use.

Cat.	Qty 1+
TH2350	$24.95

WORKSHOP TOOLS

Soldering Heatsink / Component Holder

This quality small tool is ideal as a heatsink when soldering to remove some of the heat from the semiconductor/component while soldering. It can also be used to hold small parts while soldering to avoid burnt fingers. Supplied with insulated handles, and length is 65mm.

Cat.	Qty 1+	Qty 3+	Qty 6+
TD2122	$7.95	$7.10	$6.25

PLCC Extractor

There's really only one way to remove a PLCC chip safely - and this is it. Basically a spring assisted clip carrier extractor, specifically designed to see safe and hassle free removal of PLCCs from sockets.

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1816	$13.95	$12.35	$10.95

IC Extractor 8 - 40 Pins

Deceptively simple looking device. One piece metal construction. 8 - 40 pins.

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1818	$4.95	$4.45	$3.95

Budget SMD Vacuum Pickup Tool

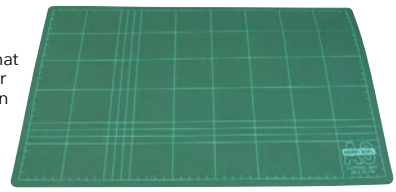
Budget SMD component pickup tool. This handy workshop SMD component pickup tool fits into your pocket and uses vacuum pressure to pick up your sensitive components without damaging them. An amazingly useful tool!

- Easy to use, one-hand operation.
- Picks up to 50g in weight.
- Supplied with 3 vacuum pads.

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1978	$17.95	$15.95	$14.35

WORK MATS

Benchtop Work Mat



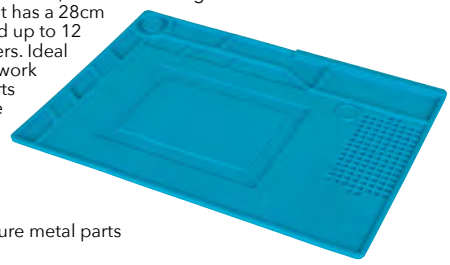
Protect your benchtop. This durable A3 size PVC cutting mat is just the thing to protect your work benchtop. You can cut on it, solder, write on it, and not damage your workplace.

- 3mm thick

	Cat.	Qty 1+	Qty 3+	Qty 6+
450 x 300mm	HM8100	$12.95	$11.35	$10.35

Silicone Benchtop Work Mat

The ultimate working mat for the advanced hobbyist or technician. The mat measures 389 x 269mm and is made from heat resistant silicone, making it suitable for soldering applications. It has multiple indentations to hold screws, parts, and components, and various magnetic areas to hold metal parts securely in place. It has a 28cm ruler and an area to hold up to 12 jeweller type screwdrivers. Ideal if you perform delicate work with tiny screws and parts to ensure you don't lose them while you're working.



- Heat resistant silicone
- Parts indentations
- 28cm ruler
- Magnetic areas to secure metal parts

	Cat.	Qty 1+	Qty 3+	Qty 6+
389 x 269mm	HM8102	$19.95	$17.95	$15.95

MAGNETS

Large Rare Earth Magnets - Pair

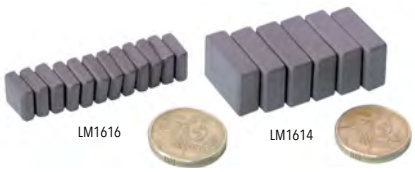
These rare earth magnets are exceptionally strong. They are made from NdFeB (Neodymium Iron Boron), providing the highest available magnetic energy of any material. Suitable for a wide variety of applications where a very strong magnet is required. The nickel casing protects the magnets because the material is very brittle.

- Sold as a pair
- Dimensions: 19mm dia x 28.2mm long
- Grade: NdFeB, N35
- Coating: Nickel

	Cat.	Qty 1+	Qty 6+	Qty 20+
Pair	LM1652	$29.95	$26.90	$23.70

Ferrite Magnets

Ideal for hobby and craftwork, school projects etc. Can be glued to wood, plastic rubber etc.



	Cat.	Qty 1+	Qty 6+	Qty 20+
10(L) x 10(W) x 4(D)mm - Pkt 12	LM1616	$4.95	$4.45	$3.95
20(L) x 15(W) x 5(D)mm - Pkt 6	LM1614	$4.95	$4.45	$3.95

Magnet Bars

Educational magnets. Ideal for hobbyists & children to learn more about magnetism.

- Each end is marked with "N" or "S"

	Cat.	Qty 1+	Qty 6+	Qty 20+
Bar Magnet -70(L) x 12(W) x 5(D)mm	TH1874	$1.95	$1.75	$1.55
U Shaped - 30(L)mm x 30(W)mm	TH1873	$1.95	$1.75	$1.55

Rare Earth Magnets with Mounting Holes

Super powerful rare earth magnets with 4.5mm countersunk mounting holes so you can fix them to your project to latch a door closed, etc.

	Cat.	Qty 1+	Qty 6+	Qty 20+
Round 25(dia) x 5(H)mm	LM1626	$12.95	$11.45	$9.95
Rectangle 50(L) x 20(W)mm	LM1628	$17.95	$15.95	$13.95

Rare Earth Magnets

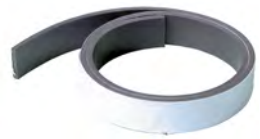
These magnets feature rare earth compounds combined with ferrite (anisotropic) to produce incredibly strong attraction/ repulsion. They are encased in nickel jackets because the material itself is very brittle. We warn you that getting a finger between these could result in a nasty pinch! They are provided with a nickel plated iron "keeper".

	Cat.	Qty 1+	Qty 6+	Qty 20+
Small - 10mm dia x 3(H)mm - Pkt 4	LM1622	$9.95	$8.95	$7.95
Medium - 25mm dia x 5mm - Each	LM1618	$9.95	$8.95	$7.95

Flexible Adhesive Magnetic Rubber Strip

This self adhesive magnetic rubber strip can be cut down to suit an application and makes an ideal fridge magnet for adhering to promotional material such as menus, calendars etc.

- 2mm thick

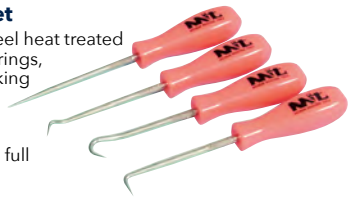


	Cat.	Qty 1+	Qty 6+	Qty 20+
500(L) x 15(W)mm	LM1612	$4.95	$4.45	$3.95

WORKSHOP TOOLS

4 Piece Mini Pick & Hook Set

These hook tools have stainless steel heat treated points, and are ideal for use on O-rings, springs, snap rings, washers, checking soldering joints, general hobbyist kit building, and probing into things, etc.
Hooks are: Straight pick, 90° hook, full hook, small angle hook.



	Cat.	Qty 1+	Qty 3+	Qty 6+
4 Piece	TH1762	$15.95	$14.35	$12.70

Pearl Catch

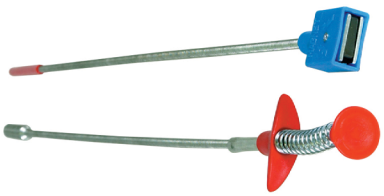
Incredibly handy tool for those moments when you need to pick up small fiddly bits and pieces. Will clip to and hold small nuts, bolts, washers, transistors, resistors, etc.

- Metal construction

	Cat.	Qty 1+	Qty 3+	Qty 6+
Pearl Catch	TH1842	$9.95	$8.75	$7.75

Super Extension Claw & Magnetic Pickup

Actually two tools. Tool No. 1 is a 600mm long flexible syringe-action claw gripper similar in operation to a pearl catch. The 4 prong gripper will capture an object up to 15mm in diameter with about 500g of gripping force. It is ideal for retrieving, say, a nut or screws in an engine compartment or piece of equipment.
Tool No. 2 is the same thing except that it has a magnet on the end instead of a claw. We sell them as a set because they complement each other.

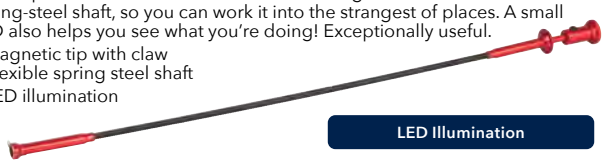


	Cat.	Qty 1+	Qty 6+	Qty 20+
Both 600mm long	TH1868	$9.95	$8.95	$7.95

Magnetic Pickup Tool with Claw and LED

These are a must for any workbench or toolbox. We've all dropped screws and tools into hard-to-reach places by accident, and retrieval can be a painful process. This device has a claw and magnet on the end of a 60cm spring-steel shaft, so you can work it into the strangest of places. A small LED also helps you see what you're doing! Exceptionally useful.

- Magnetic tip with claw
- Flexible spring steel shaft
- LED illumination



Specifications	TH1864
Batteries	3 x LR44 (Included)
Weight	90g
Dimensions	60cm

	Cat.	Qty 1+	Qty 6+	Qty 20+
600mm long	TH1864	$14.95	$13.45	$11.95

Scriber

This pen type tool will scribe on metal, glass, plastic, ceramics and tools. Stylus is made of tungsten steel. Looks like a pen, and has a pocket clip

	Cat.	Qty 1+	Qty 3+	Qty 6+
110mm long	TD2120	$7.95	$6.95	$6.25

Automatic Centre Punch

This handy tool allows you to make a centre punch mark with one hand. You simply hold the unit against where you would want a centre punch mark, apply downward pressure until the internal hammer mechanism trips. The pressure is adjustable, depending on the hardness of the surface. Sturdy brass body with hardened steel centre punch.

- Sometimes called a prick-punch

	Cat.	Qty 1+	Qty 3+	Qty 6+
125mm long	TH1770	$9.95	$8.95	$7.95

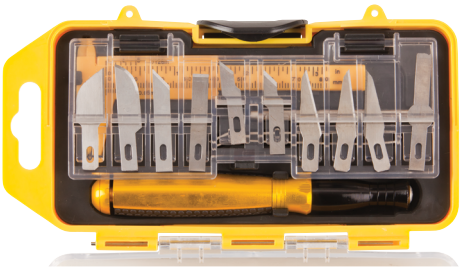
KNIVES & FILES

14 Piece Precision Hobby Knife Set

Handy hobby tool set comprising of 10 different blades, handle, 70mm long tweezers, 90mm long flat screwdriver and vernier calipers, which measure up to 81mm (3.1inches).

Blades included:

1 x #1 3 x #11
1 x #4 2 x #12
1 x #7 1 x #17
1 x #10



• Case dimensions: 170(W) x 85(W) x 35(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Hobby Knife Set	TH1916	$19.95	$17.70	$15.70
Spare Blades - 10 Per Set	TH1917	$5.95	$5.25	$4.75

Artwork Knife

Light duty precision knife with safety cap. Ideal for fine angle cuts, etching, hollowing, scoring, scraping, scribing,
stripping and trimming. Four piece jaw chuck method of blade retention.

	Cat.	Qty 1+	Qty 3+	Qty 6+
Knife	HG9955	$4.95	$4.45	$3.90
Blades Pkt 5	HG9956	$3.95	$3.45	$3.15

File Saw

Great for cutting odd shapes in plaster, PVC pipe, PVC sheeting, leather, plastic and many other soft materials. The blade measures 175mm long and the large, easy grip handle is 120mm long. Not to be used as a nerve broach or other dental work.

	Cat.	Qty 1+	Qty 3+	Qty 6+
File Saw	TH2127	$17.95	$15.95	$13.95

10 Piece Needle File Kit

Every toolbox should have a set of needle files. This set contains every profile you could ever need. All have integrated plastic handles and come in a handy storage wallet. Each is 162mm long.

Profiles:

- Round
- Elliptical
- Half-round
- Double half round
- Triangle
- Square
- Flat
- Flat tapered
- Knife
- Flat tapered safe back

	Cat.	Qty 1+	Qty 3+	Qty 6+
10 Piece	TD2128	$17.95	$15.95	$13.95

Deburring Tool

Clean up the edges of a hole. Suitable for steel, plastic, wood etc.
Blades are fully ground for safety. SK2 steel blades are hardened to HRC64.
Supplied with spare blade. Will deburr virtually anything.

	Cat.	Qty 1+	Qty 3+	Qty 6+
	TH1845	$13.95	$12.45	$10.95

Deburring Tool Suitable for Pipes

Before

After

This drill-mounted tool fits in the chuck of an electric drill.
It is designed to almost instantly produce a burr-free threaded end to a bolt or threaded rod that has been hacksawed, guillotined, etc. It covers threaded bolts or rods from about 6.0 to 18.0mm diameter. It will also chamfer, say, a round bar or ½" diameter piece of concrete reinforcing bar. It works on mild steel, brass, stainless steel (only works marginally well on stainless steel) etc. This will increase productivity on a building site but is also ideal for the home handy man.
Dimensions: 52(L) x 28(Dia.)mm.

Works well on mild steel, reobar, brass etc. Not so good on stainless steel.

	Cat.	Qty 1+	Qty 3+	Qty 6+
	TH1854	$9.95	$8.95	$7.95

SPANNER AND ALLEN KEY SETS

10 Piece Spanner Set for Electronics

Ideal mini spanner set. Set of 10 pieces, open end/ring combinaion. Suitable for light hobbyist use.

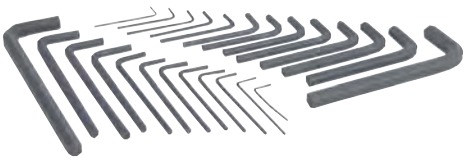
- Sizes supplied are: 4.0, 4.5, 5.0, 5.5, 6.0, 7.0, 8.0, 9.0, 10 & 11mm
- Supplied in a plastic wallet

	Cat.	Qty 1+	Qty 3+	Qty 6+
10 Piece	TH1910	$24.95	$22.45	$19.95

25 Piece Allen Key Set

25 different size Allen keys in a plastic wallet.
Both metric and imperial sizes.

- Metric: 1.27, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 7.0, 8.0, 10.0mm
- Imperial: 3/8, 1/4, 7/32, 3/16, 5/32, 9/64, 1/8, 7/64, 3/32, 5/64, 1/16"



	Cat.	Qty 1+	Qty 3+	Qty 6+
25 Piece	TD2052	$11.95	$10.70	$9.50

Tech talk

ALLEN KEYS FOR CORDLESS DRILL USE

Allen keys are very common these days and small sets like the one above are really quite inexpensive. The boss here has a set where he has cut off the short return piece of the Allen key with an angle grinder. The Hex bit then fits conveniently into the chuck of the cordless drill. The low speed setting on a typical "cordless" is generally more than enough torque for most jobs. It's a great way to assemble flat-pack furniture & saves wear & tear on your fingers.

Find Out More In Store
Our staff offer friendly and helpful service.
We're here to help.

SPECIALTY REPAIR TOOLS & MAGNIFIERS

WATCH REPAIR TOOLS:

Jaycar has been fiddling with micro tools for years now, from tiny jewellers screwdrivers to small spanner sets to tiny table mounted vices etc. We have discovered a source of reasonably priced watchmakers' tools (real; pull-watches-apart-tools.) Here they are, folks. We expect them to be popular; they are Jaycar kind of products.

2 Piece Watch Case Opener Set

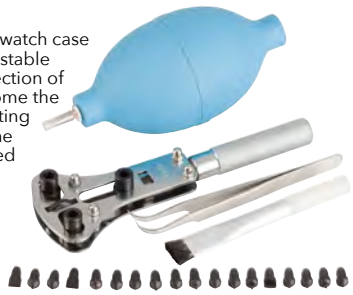
This set consists of an adjustable opener that engages the little recesses on the back of a watch. You can adjust the removing lugs very accurately to get a tight fit - absolutely essential. The other half of the set looks like a small oyster shucking knife (Appropriate when you think about it!). It is just fine enough to get into that tiny groove that some of the older watch covers have.

- Can open cases 6 - 50mm diameter

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1929	$24.95	$22.45	$19.95

4 Piece Watchmakers' Kit

Central to this kit is the hand held watch case opener/holder. It has a screw-adjustable case retainer with a very large selection of retaining lugs - indeed 18 in all, some the same. Also included is a large dusting bulb pump, No. 7 tweezers and fine dusting brush. You will be delighted with this set.



Cat.	Qty 1+	Qty 3+	Qty 6+
TH1932	$34.95	$31.45	$27.90

Watchmaker's Mallet with Interchangeable Heads

This unit weighs almost 90 grams and is 185mm long. It features 6 different heads, 4 steel ones, a brass one and acrylic plastic one. It seems that even in watchmaking you need a "persuader". Ball pein on the opposite end.

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1927	$14.95	$13.45	$11.95

Watch Bracelet Link Removal Pliers

This tool enables you to remove and reinstall the fiddly little bracelet pins, so necessary when the bracelet band is new and generally too big for the wearer. It comes with a 1.0mm and 0.8mm pin removal insert.

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1923	$39.95	$35.90	$31.90

Watch Case Holder

The sturdy, but adjustable frame has 4 nylon retaining posts to enable a good safe grip on the watch case. The frame could then be held in a vice, freeing up your hands.

Note: Watch not included.

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1934	$15.95	$13.95	$12.45

Wrist Watch Strap Spring Bar Assortment

This is a must. A selection of the little spring bars that get broken/bent/lost even by the most careful wearers. This set frees you from the tyranny of the watchmaker. One use will pay for the cost of the whole set. The assortment consists of a total of 360pcs of the most common sizes: from women's 8mm to men's 25mm. All 1.5mm Dia. In detail the set includes 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 & 25mm types. Has single sided spring bar and double sided types. Supplied in quality compartment case.

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1928	$24.95	$22.45	$19.95

Pin Extractor Press

A handy little pin-extractor/inserter press with a 0.8mm punch. Mainly intended for taking links out of watch bands, but endless other uses for jewellery making, modelmaking and hobbies.

- 2 spare pin punches
- Assortment of 12 pins

p.A45 mini HSS tap & die set

Cat.	Qty 1+	Qty 3+	Qty 6+
TH2014	$10.95	$9.85	$8.75

MAGNIFIERS

Eye Magnifier

This 3 times magnifier is handy for checking PC boards, looking at stamps or coins, jewellery, etc.

- Every hobbyist should have one
- Dimensions: 28(H) x 22(dia view area) x 40(dia base)mm

	Cat.	Qty 1+	Qty 5+	Qty 10+
3x Magnification	QM3515	$9.95	$8.95	$7.95

LED Handheld Magnifier with Three Lenses

This versatile illuminated hand magnifier set includes three interchangeable lenses. Built in LEDs mean this is great for bedtime reading, don't wake your partner reading with the lights on anymore.

- Requires 2 x AAA batteries (sold separately)
- Dimensions: 200(L) x 110(W) x 27(D)mm

	Cat.	Qty 1+	Qty 5+	Qty 10+
2.5x, 5x, 16x Magnification	QM3519	$19.95	$17.95	$15.95

Folding Desktop Magnifying Glass

This huge 4.5" diameter viewer allows hands free operation. It will fold into a neat and easy to store package.

p.A126 Digital Microscopes

	Cat.	Qty 1+	Qty 5+	Qty 10+
2x Magnification	QM3505	$9.95	$8.95	$7.95

Handheld Magnifying Glass with COB LEDs

Powerful magnification with the added benefit of LEDs, all in a convenient hand-held case! It weighs just over 200g including batteries, so you can take it anywhere too. There are three LEDs so it will provide well-spread illumination of your subject matter. Includes LED on/off switch.

- 3 x COB LEDs
- Lightweight
- Handheld
- Weight: 201g (Including Batteries)
- Requires 2 x AA batteries (sold separately)
- Dimensions: 240(L) x 114(W) x 20(D)mm

	Cat.	Qty 1+	Qty 5+	Qty 10+
3x Magnification	QM3535	$12.95	$11.45	$9.95

For next day delivery, or Click and Collect, see page A4

MAGNIFIERS & INSPECTION AIDS

3.5x LED Magnifier with Scale

With all metal construction and glass optics, this superb little magnifier provides 10 dioptre magnification with razor-sharp clarity. Inside the viewer is a graduated scale in metric and imperial graduations so you can actually take measurements of an object down to fractions of a millimetre. Three LEDs and the 26mm eyepiece provide crystal-clear even illumination of the subject. Ideal for checking PCBs in preproduction, lab, science, education or engineering applications.

1 YEAR WARRANTY

- Satin chrome finish
- Ground glass optics
- Includes 2 x AA batteries
- Dimensions: 180(L)mm

	Cat.	Qty 1+	Qty 5+	Qty 10+
3.5x Magnification	QM3539	$29.95	$26.95	$23.95

LED Headband Magnifier

This magnifying headset leaves both hands free and can be worn over prescription or safety glasses. It also has a built-in LED light that can be rotated up, down or side to side to illuminate your work. There are three lenses that can be used in combinations to give 1.5x, 3x, 8.5x or 10x magnification. The head strap is fully adjustable and locks into position and the lens assembly can be swivelled up out of the way when not in use. A multitude of uses including lapidary, jewellery, model-making, electronics and camera repair.

- Requires 2 x AAA batteries

	Cat.	Qty 1+	Qty 5+	Qty 10+
1.5x, 3x, 8.5x, 10x Magnification	QM3511	$29.95	$26.95	$23.95

None of the products shown here magnify our prices!!

Illuminated Gooseneck Magnifier

The gooseneck magnifier is a valuable accessory for coin/stamp collectors, photography etc. The 2X main lens and 5X insert lens with the bonus of 2 LED lights, is a welcome addition for any hobbyist. The magnifier is clip-on or free standing. Suitable for most flat surfaces or workplace incline up to 38mm thick. The flexible metal arm ensures that you can position the magnifier just where it's needed. This handy magnifier also comes with a soft protective pouch for your lens to protect it from dirt and dust. It also has metal stablisers to ensure that your magnifier remains stable while working.

- Stands 225mm high
- Lens Diameter: 88mm
- Requires 3 x AAA batteries

	Cat.	Qty 1+	Qty 5+	Qty 10+
2x/5x Magnification	QM3532	$29.95	$26.95	$23.95

Collapsible Mini Magnifier

Collapses down into a compact size for storage or travel, but opens up into a powerful 8 dioptre magnifier, complete with LED illumination. Requires 3 x AAA batteries for the light, so it'll go anywhere you do.

	Cat.	Qty 1+	Qty 5+	Qty 10+
3x Magnification	QM3536	$14.95	$13.45	$11.95

1.75x Desktop Magnifier with LEDs

Perfect for compact workspaces. A large 100mm 3-dioptre glass lens provides powerful magnification. 30 LEDs are mounted around the ring for perfect illumination. The desktop stand includes two knuckles so you can adjust the lens to where you need it.

- Mains powered, adaptor included.

1 YEAR WARRANTY

Specifications	QM3552
Power	240V @ 32mA, 6W, 50/60Hz
LED Type	SMD 2835
LED Lifetime	20,000 Hours
Lumens	560
Light Colour	6000-6500K -CRI80
Lens	100mm Glass
Weight	1.2kg
Cable Length	1.3m
Dimensions	184(W) x 330(H) x 160(D)mm

	Cat.	Qty 1+	Qty 5+	Qty 10+
1.75x Magnifying Lamp	QM3552	$59.95	$53.95	$47.95
2.25x, 5 dioptre lens to suit	QM3553	$12.95	$11.45	$9.95

3x Laboratory Magnifier with LEDs

The ultimate workbench companion when working on tiny projects. Powerful 127mm diameter 3-dioptre magnification lens brings tiny items into clear view, while the fully adjustable arm puts it wherever you need it. 60 LEDs around the ring of the magnifier provide powerful illumination with high / low brightness settings. A plastic flip-down cover keeps the magnifier glass in top condition when not in use. Mains powered, adaptor supplied.

- High / low light settings
- Fully adjustable arm with clamp mount
- Large diameter magnifier

Specifications	QM3554
Power	240V @ 62mA, 4W/8W, 50/60Hz
LED Type	SMD 2835
LED Lifetime	20,000 Hours
Lumens	380/760
Light Colour	6000-6500K -CRI80
Lens	127mm Glass
Weight	2.4kg
Height	Up to 900mm

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 5+	Qty 10+
1.75x, 2.25x, 3x Lab Magnifier	QM3554	$119.00	$106.95	$94.95
5 dioptre lens to suit	QM3555	$12.95	$11.45	$9.95
8 dioptre lens to suit	QM3556	$19.95	$17.95	$15.95

Rolling Floor Base for Magnifying Lamps

Mount a magnifying lamp to this base and you can roll it around the floor providing even greater flexibility in observation work. Great for lab work. Heavy base so it doesn't easily topple over.

1 YEAR WARRANTY

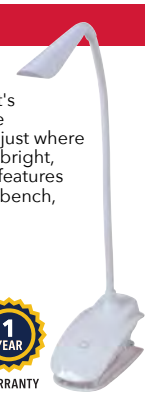
- Suitable for use with magnifier QM3554
- Dimensions: 700(H) x 385(Dia)mm

Cat.	Qty 1+	Qty 5+	Qty 10+
QM3549	$99.95	$89.95	$79.95

LED DESK LAMPS

Rechargeable LED Desk Lamp with Clamp

Fantastically stylish with touch-sensing brightness control. It's rechargeable and will run for up to 12hrs depending on the brightness setting. The gooseneck allows you to position it just where you want, and the desk clamp keeps it firmly in place. Ultra bright, white COB LED for daylight white light. The LED head also features rubberised ABS for durability. So delightful it suits the workbench, bedside table, or study area all very well.



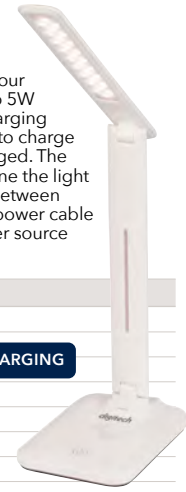
Specifications	SL3145
Battery	500mAh lithium polymer battery
Burn Time	Up to 12hrs
Recharge Time	5hrs
3 Level Brightness	100%, 70%, 30%
Dimensions / Weight	115(L) x 55(W) x 380(H)mm, 130g

1 YEAR WARRANTY

Lumens	Cat.	Qty 1+	Qty 3+	Qty 6+
120	SL3145	$16.95	$14.95	$13.45

LED Desk Lamp with Qi Wireless Charging

This modern desk lamp can wirelessly charge your Qi-enabled phone while you're at your desk. Simply place your phone on the charging zone on the lamp's base for up to 5W charging, and take it away without any restriction of a charging cable. There is also a 5V 1A USB port in the base for you to charge other phones and devices that cannot be wirelessly charged. The bright flickerless LED lamp has an adjustable head to shine the light just where you need it, and has a touch switch to select between natural or white light, or to adjust the brightness. A USB power cable is supplied to power the lamp from an available 5V power source (2A or higher).



Specifications	SL3150
Input Power	5VDC @ 2A
Wireless Charging	5VDC @ 1A
USB Current Output	5V @ 1A (5W)
Output Power	5W
Charging Efficiency	75% (Max)
Colour Temperature	3000-6500K
Dimensions	323(H) x 275(D) x 120(W)mm

WIRELESS CHARGING

	Cat.	Qty 1+	Qty 3+	Qty 6+
	SL3150	$34.95	$30.95	$27.95

STORAGE CASES

Ideal for carrying small components and is an indispensable addition to any tool kit. See through plastic construction enables the contents to be easily identified and the 2 snap action latches secure the lid and keep everything in its rightful place.

6 Compartment Mini Storage Case

2 of the compartments have guides to enable them to be divided in half and 2 dividers are included.

- Compartments: 27(W) x 77(L) x 23(D)mm
- Overall dimensions: 125(W) x 85(L) x 27(D)mm

	Cat.	Qty 1+	Qty 4+	Qty 10+
6 Compartments	HB6308	$3.50	$3.15	$2.80

18 Compartment Storage Box

Consists of three rows with removable dividers so you can configure it for longer parts.

- Compartment size: 37(L) x 37(W) x 30(D)mm
- Dimensions: 230(L) x 115(W) x 35(D)mm

	Cat.	Qty 1+	Qty 4+	Qty 10+
18 Compartments	HB6306	$5.50	$4.95	$4.40

18 Compartment Storage Case

6 compartments measuring 43(W) x 37(D) x 167(L)mm. These can be divided into 2, 3 or 4 sub-compartments using the dividers provided.

- Overall dimensions: 274(W) x 40(D) x 175(L)mm

	Cat.	Qty 1+	Qty 4+	Qty 10+
18 Compartments	HB6312	$11.95	$10.45	$9.45

28 Compartment Storage Case

Can be configured to have anything from 4 big compartments measuring 350(W) x 52(L) x 45(D) mm to 28 compartments measuring 48(W) x 52(L) x 45(D) mm, or anything in between using the dividers provided.

- Overall dimensions: 357(W) x 48(H) x 220(D)mm

	Cat.	Qty 1+	Qty 4+	Qty 10+
28 Compartments	HB6313	$16.95	$14.95	$13.45

Industrial Storage Cases

Built for the rough and tumble of the building site, factory or workshop. Made from sturdy ABS with solid clasps and removable compartment trays so you can take parts with you to the job. Two sizes available:

15 COMPARTMENT STORAGE

12 compartments: 55(L) x 40(W) x 50(D)mm
3 compartments: 80(L) x 50(W) x 50(D)mm
Case size: 335(L) x 205(W) x 60(D)mm

19 COMPARTMENT STORAGE

4 compartments: 55(L) x 40(W) x 50(D)mm
8 compartments: 80(L) x 50(W) x 50(D)mm
7 compartments: 110(L) x 80(W) x 50(D)mm
Case size: 335(L) x 420(W) x 60(D)mm

	Cat.	Qty 1+	Qty 4+	Qty 10+
15 Compartments	HB6304	$9.95	$8.95	$7.95
19 Compartments	HB6305	$18.95	$16.95	$14.95

MAN CAVE STORAGE

44 Piece Wall Mounted Storage

Keep your workbench neat and tidy, while having everything at your fingertips. This fantastic 44-piece organiser mounts to the wall, while providing various methods for storage. There's 28 storage bins in various sizes, 4 assorted tool holders, and 10 pegs for hanging items too. It can be laid out in all sorts of different configurations to suit your particular needs. It takes just minutes to assemble, and you're ready to go. Minor assembly required.

- Various tool holders
- Assorted bin sizes
- Flexible mounting configuration

Specifications	HB6340
Overall Weight	4.9kg
Dimensions	Small Grey Bins: 101(W) x 115(D) x 70(H)mm Blue Bins: 100(W) x 163(D) x 72(H)mm Large Grey Bins: 105(W) x 210(D) x 70(H)mm Wall Mounted Rack: 479(W) x 538(H) x 15(D)mm

	Cat.	Qty 1+	Qty 4+	Qty 10+
44 Piece	HB6340	$39.95	$35.95	$31.95

16 Bin Tabletop Storage Organiser

A simple way to keep your desktop free from component clutter and mess. The benchtop stand provides support for 12 small storage bins, and 4 large storage bins to hold your components, spare parts, small tools, or whatever you like! There is also a fantastic magnetic strip along the top of the frame, perfect for storing all your steel hand tools such as screwdrivers and spanners, or even just loose screws, bolts, nuts and other easily lost metal parts! Some basic assembly is required.

- Magnetic strip for tools
- Plenty of storage
- No fuss setup

Specifications	HB6341
Bin Capacity	Red: 2.2kg, Blue: 3.6kg
Weight	2.7kg
Dimensions	Red Bins: 103(W) x 165(D) x 76(H)mm Blue Bins: 152(W) x 235(D) x 127(H)mm Organiser: 635(W) x 254(D) x 658(H)mm

	Cat.	Qty 1+	Qty 4+	Qty 10+
16 Bins	HB6341	$49.95	$44.95	$39.95

For next day delivery, or Click and Collect, see page A4

PARTS CABINETS

6 Bin Parts Rack Cabinets

SMALL

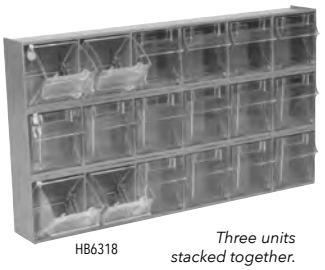
Similar to our large parts rack, this unit is designed to house smaller items such as ICs, nuts, screws etc.

HB6317

- Trays measure 60(W) x 65(H) x 45(D)mm each and also tilt down to 45 degrees
- Can be wall mounted & multiple units can be used for larger storage requirements
- Overall dimensions: 400(W) x 75(H) x 60(D)mm

LARGE

This handy parts rack holds a variety of components in neat, see through trays that tilt down to an angle of 45 degrees for easy access.



HB6318

Three units stacked together.

- Each has an integrated label holder and measures 85(W) x 95(H) x 65(D) mm
- The rack can be wall mounted and multiple units can be nested together for larger storage requirements
- Dimensions: 600(W) x 110(H) x 90(D)mm

	Cat.	Qty 1+	Qty 4+	Qty 10+
Small Rack Cabinets	HB6317	$9.95	$8.75	$7.75
Large Rack Cabinets	HB6318	$24.95	$22.35	$19.70

30 Drawer Parts Cabinet

6 rows of 5 drawers, measuring 50(W) x 115(D) x 30(H)mm. Ideal for workshop use & can be wall mounted.

- Stack multiple units together for larger storage
- Overall size: 280(W) x 130(D) x 210(H)mm

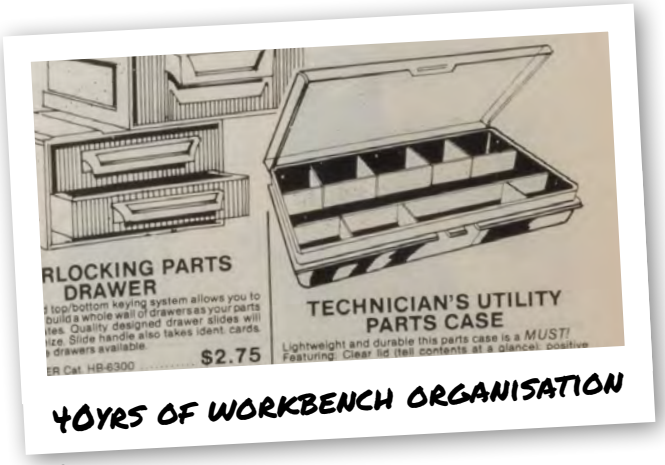
	Cat.	Qty 1+	Qty 4+	Qty 10+
30 Drawers	HB6323	$29.95	$26.95	$23.95

33 Drawer Parts Cabinet

A very useful cabinet with 8 rows of 4 pull out drawers (32 drawers) plus one full width pull out drawer at the bottom for larger items (total 33 drawers). Each small drawer is 125mm deep and 65mm wide. The unit can be free standing, or, wall mounted if required. Ideal for storage requirements and workshop.

- Dimensions: 414(H) x 304(W) x 135(D)mm

	Cat.	Qty 1+	Qty 4+	Qty 10+
33 Drawers	HB6330	$29.95	$26.95	$23.95



12 Drawer Modular Storage Cabinet

Get your work area in order and looking amazing with this modular parts storage system. The cabinet measures 295 x 200 x 160 overall, and features twelve slide-out draws to keep your components organised. Add more cabinets on top or side-by-side by simply sliding them into the locking guides on the side or base.

- Dimensions: 295(W) x 200(H) x 160(D)mm

	Cat.	Qty 1+	Qty 4+	Qty 10+
12 Drawers	HB6332	$19.95	$17.95	$15.95

4 Tray Tool/Storage Case

On-site storage of parts, tools, fishing tackle or anything else you need to tote around. Each compartment has a 233 x 122 x 32mm 13 compartment storage box for small items with dividers that can be removed to accommodate larger things. All the hinges and catches are the durable pintle type, not a flimsy bit of folded plastic that will snap after a week. The top tray has a generous 265 x 160 x 65 space for ancillary items and it's finished in a tasteful shade of industrial yellow and black.

- Dimensions: 270(W) x 260(H) x 150(D)mm

	Cat.	Qty 1+	Qty 4+	Qty 10+
4 Drawers	HB6302	$24.95	$22.45	$19.95

TOOL CASES & BOXES

Foam Insert Aluminium Attache Cases

Ideal for Camera, Video and Test Equipment, these cases feature removable 15mm square foam pieces so you can make a hole to the exact size of your valuable equipment. The lid also has a foam insert for complete protection. Cases are lockable and supplied with two keys. Great for wine and glasses also.

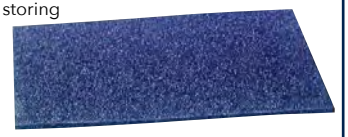
HB6355

HB6356

W x D x H(mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
Small 407 x 277 x 95	HB6355	$49.95	$44.95	$39.95
Large 450 x 320 x 145	HB6356	$79.95	$71.95	$63.95

RELATED PRODUCT:
CONDUCTIVE FOAM

Non-static reusable sheeting for storing CMOS, IC's, LSI's, etc.



- Will store up to 150 ICs on one sheet
- Size 225 x 150mm
- Ideal for lining storage trays to provide antistatic protection
- Can be cut with scissors or hobby knife for smaller pieces

	Cat.	Qty 1+	Qty 3+	Qty 6+
	ZV9998	$9.95	$8.75	$6.75

INSPECTION CAMERAS

Inspection Camera with 2.4" LCD

With a camera diameter of only 9mm, detailed inspection of some very tight spots is possible. Its comfortable grip and forward facing controls make it easy to detect and diagnose the inaccessible. 9mm camera head for up-close visual inspections in tight spaces. Requires 4 x AA batteries.

- Forward facing controls
- Adjustable brightness LED illuminator
- Adjustable LCD brightness

Specifications	QC8710
Sensor	CMOS
Display	2.4" colour LCD
Resolution	480 x 234 pixels
Reach	1m
Attachments	Mirror, hook & pick-up magnet

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 2+	Qty 4+
Inspection Camera with 2.4" LCD	QC8710	$149.00	$133.95	$118.95
Extension Shaft 2m	QC8702	$89.95	$80.95	$71.95

USB Mini Inspection Camera with 1.5m Flexible Cable

Inspect areas your head or hands simply can't fit into and your limited humans eyes can't see. Ideal for finding dropped screws/bolts, seeing inside car engine bays, checking inside pipes, under grates, up rangehoods, in ceilings, and much more. This unit comes with three brilliant add-ons, a hook, a magnet, and a 45° mirror that can be attached to the end of the camera to help you retrieve those important bits. There are 4 white LEDs at the front of the camera that can have their brightness adjusted with a dial fused onto the cable. With the supplied software you can also capture video and images for playback at a later date. Requires no batteries, just connect to your laptop and start viewing.

- Water resistant camera head and cable
- 4 White LED Lights (brightness adjustable)

Specifications	QC3373
Flexible Cable Neck Diameter	5mm
USB Cable	USB2.0
Camera Head Outer Diameter	10mm
Resolution	640x480
Lens View Angle	54°
Focal Distance	6cm-infinite
Frame Rate	up to 30fps @ 640x480
Boom Length	1.5m
Compatibility	Windows XP, Vista, 7, 8 & 10

	Cat.	Qty 1+	Qty 2+	Qty 4+
1.5m	QC3373	$49.95	$44.95	$41.95

Inspection Camera with 4.3" LCD and Record/Snapshot Function

NEW

The perfect tool to inspect hard to reach places. The 720p HD camera is just 5.2mm in diameter, IP67 waterproof rated, and features built-in LEDs to illuminate the area you are inspecting. The hand held 4.3 inch colour TFT LCD screen has a flip function to help adjust the view depending on the angle, digital zoom, and can record the vision or snapshots to an SD card (not included) for you to playback later. You could even plug your SD card into a computer or compatible TV for a better view of what you inspected. Supplied with magnetic pick-up, mirror, and hook clip-on probe attachments.

- 4.3" LCD screen with record function
- Waterproof 720p camera with illumination
- Three probe attachments
- 4 x AA required (not included)
- Image zooming 2x variable digital zoom

Record and snapshot function

Specifications	QC8718
Camera Diameter	5.2mm
Camera Resolution	1280 x 720 pixels
Display	4.3" colour LCD
Screen Resolution	480 x 272 pixels
Reach	0.9m
Memory	SD card (not included)
Image/Video Format	JPG / AVI
IP Rating	IP67
Attachments	Mirror, hook & pick-up magnet
Dimensions	154(L) x 88(H) x 33(W)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Inspection Camera with 4.3" LCD	QC8718	$199.00	$178.95	$158.95

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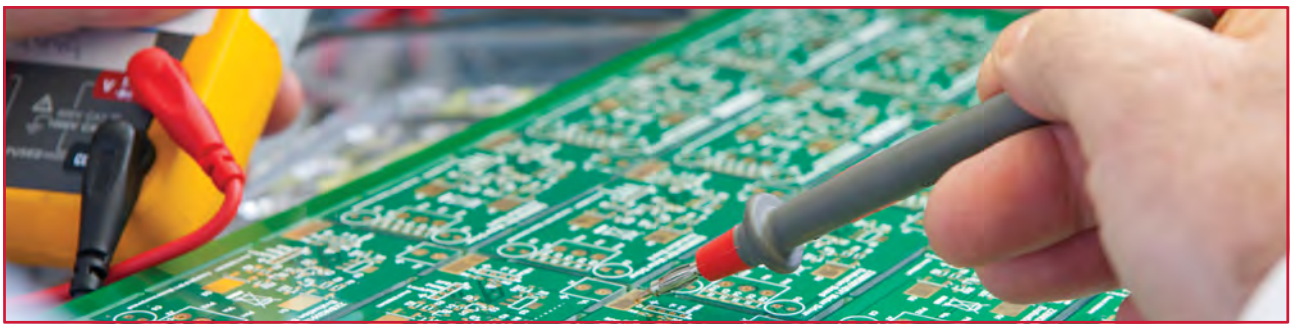
DIGITAL MULTIMETERS



DIGITAL MULTIMETERS:

A multimeter digital or analogue, but mainly digital these days, is without a doubt your most trusted and widely used piece of test equipment. Indeed, it may only be your ONLY piece of test gear and certainly should be your first investment in test gear.

Most of our range of multimeters carry a LIFETIME GUARANTEE. Not even many of the ridiculously expensive Euro or US made products have a lifetime guarantee, so why pay 2-3 times as much for the similar-performing meter when you don't have to?

We sell more multimeters in Australia and New Zealand than anyone else.

The reason for this, of course, is:

- We are trusted
- We stand by our products 7 days a week
- We deliver the best quality for the price
- We have a great range
- And we are going to reveal to you our BIG SECRET

What's the secret? It is this. We don't carry spare parts for our meters!

Why? They are so reliable, they hardly ever break.

If, in the unlikely event you had a faulty meter, we would simply give you a new one.

pick me

DIGITAL MULTIMETER SELECTION GUIDE

We've colour coded the quick selection guide below to make it easier for you to pick the meter that best fits your needs. If you are a hobbyist and just starting out, look at any of the Green labelled products. They are both budget friendly and not overly complicated to use. For someone who has used a multimeter before and is looking for broader measurement, the Blue mid- range ones are for you. If you use your multimeter every day for work, then the orange Professional colour range is for you. These meters have all the bells and whistles and the highest ratings out of any of the multimeters we carry.

ENTRY
MID
PRO

	QM1500	QM1517	QM1527	QM1529	QM1321	QM1323	QM1552	QM1446	QM1551	QM1549	QM1020	QM1571	QM1578	QM1594	XC5078	QM1493
Display (Count)	2000	2000	2000	2000	4000	4000	2000	2000	4000	4000	Analogue	4000	6000	4000	2000	4000
Security Category	Cat II 500V	Cat III 600V	Cat III 500V	Cat III 600V	Cat III 1000V	Cat III 600V	Cat IV 600V	Cat III 600V	Cat III 600V	Cat IV 600V	Cat II 1000V	Cat IV 600V	Cat III 1000V	Cat IV 600V	Cat III 600V	Cat III 1000V
Auto-range				•	•	•		•	•	•		•	•	•	•	
True RMS					•		•		•	•		•	•			
VDC	1000V	500V	500V	600V	1000V	600V	1000V	1000V	600V	1000V	1000V	1000V	1000V	250V	600V	1000V
VAC	750V	500V	500V	600V	750V	600V	750V	700V	600V	1000V	1000V	1000V	1000V	250V	600V	750V
ADC	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A	200mA	
AAC	-	-	-	10A	10A	10A	10A	10A	10A	10A		10A	10A	10A	200mA	
Resistance	2M	2M	2M	20M	40M	40M	200M	20M	40M	40M	20M	40M	60M	20M	20M	400Ω
Capacitance					100mF	100µF	100mF		100µF	100µF		100µF	6000µF	100µF		
Frequency					10MHz	10MHz	10MHz		10MHz	10kHz		10MHz	10kHz	10MHz		
Temperature						760°C	1000°C	1000°C	760°C			760°C	760°C	750°C		
Duty Cycle					•	•			•	•		•	•			
Continuity			•	•	•	•	•	•	•	•	•	•	•	•	•	
Relative Measurement						•	•		•	•		•	•	•		
Min / Max Hold					•		•	Max Hold				•	•		Max Hold	
Non Contact Voltage			•	•	•	•	•		•			•		•		
IP Rated										IP67		IP67	IP67			
Page	A55	A55	A56	A56	A57	A57	A58	A58	A59	A59	A61	A60	A60	A61	A62	A62

DIGITAL MULTIMETERS CONTINUED

Low Cost DMM

PERFECT FIRST METER

This is a full featured meter with plug-in 4mm probes AND transistor tester. This is the ideal first multimeter, and will give years of faithful service, in fact, you will only need to replace this meter if you require a unit with very high input impedance.

- 19 Range
- 2000 Count
- Transistor Test
- Diode Test
- 10A DC Current
- Ideal First meter
- Compact Size

2 YEAR WARRANTY

Test Leads included

Specifications	QM1500
Display	2000 count
Measurement Cat.	Cat II 500V
Basic VDC Accuracy	0.5%
DC Voltage	200mV, 2V, 20V, 200V, 1000V (± 0.5%)
AC Voltage	200V, 750V (Max input 750V RMS) (± 1.2%)
DC Current	2000µA, 20mA, 200mA, 10A (± 1.2%)
AC Current	-
Resistance	200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ (± 1.2%)
Capacitance	-
Frequency	-
Inductance	-
Temperature	-
AC Rectification	Average
Input Impedance	1MΩ
Special Features	Transistor test
Battery / Fuse	9V / 500mA/250V (all included)
Dimensions	125(H) x 68(W) x 23(D)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1500	$9.95	$8.75	$7.75

Economy Cat III DMM with Data Hold

A simple and practical multimeter with a luminous backlit display, data hold function, shock-proof durable design. A fully featured multimeter perfect for a student or the enthusiast on a budget. The durable enclosure helps prevent damage from knocks and falls.

- Cat III 600V
- 2000 Count
- Data Hold
- Square Wave Output
- Backlit Display
- Continuity Buzzer

2 YEAR WARRANTY

Test Leads included

Specifications	QM1517
Display	2000 count
Measurement Cat.	Cat III 600V
Basic VDC Accuracy	2%
DC Voltage	200mV, 2000mV, 20V, 200V, 500V ± (1.0% + 10)
AC Voltage	200V, 500V ± (2.0% + 5)
DC Current	200µA, 2000µA, 20mA, 200mA, 10A ± (2.0% + 5)
AC Current	-
Resistance	200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ ± (2.0% + 5)
Capacitance	-
Frequency	-
Inductance	-
Temperature	-
AC Rectification	Average
Input Impedance	1MΩ
Special Features	Data hold, backlight, square wave output, buzzer
Battery / Fuse	9V / F200mA/250V (all included)
Dimensions	115(H) x 65(W) x 30(D)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1517	$16.95	$14.95	$13.45

DIGITAL MULTIMETERS CONTINUED

Data Hold DMM with Non Contact AC Voltage Detection

A handy digital multimeter with lots of features at a great price has all the features you would expect including holster and probes. Excellent for those that are ready to take the next step in the world of electronics. It also features a built-in non-contact voltage detector that sounds an internal buzzer and flashes an LED when the DMM is in close proximity to mains power.

- 19 Range
- 2000 Count
- Non-contact Voltage Detection
- Diode Test
- 10A DC Current
- Data Hold
- Backlight
- Auto Power-off
- Continuity Buzzer

2 YEAR WARRANTY

Specifications	QM1527
Display	2000 count
Measurement Cat.	Cat III 500V
Basic VDC Accuracy	0.8%
DC Voltage	200mV, 2V, 20V, 200V, 500V (± 0.8%)
AC Voltage	200V, 500V (±1.8%)
DC Current	200µA, 2mA, 20mA, 200mA, 10A (± 1%)
AC Current	-
Resistance	200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ (± 1%)
Capacitance	-
Frequency	-
Inductance	-
Temperature	-
AC Rectification	Average
Input Impedance	1MΩ
Special Features	Transistor test, Data hold, backlight, non-contact voltage
Battery / Fuse	9V / 200mA/600V (all included)
Dimensions	145(H) x 70(W) x 32(D)mm

This meter includes QUALITY Test Leads

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1527	$21.95	$19.45	$17.45

Autoranging DMM with Non-Contact Voltage Detection

This Cat III DMM is suitable for voltages up to 600VAC and has 15mm high digits for easy reference. Featuring overload protection and indication, diode check, continuity check, and you won't have to worry about batteries going flat with the auto power off feature. It also features a built-in non-contact voltage detector that sounds an internal buzzer and flashes an LED when the DMM is in close proximity to mains power.

- Cat III 600V
- 2000 count
- Auto ranging
- Non-contact voltage detection
- Backlight
- Data hold
- Low battery warning
- Auto power-off

LIFE LIFETIME GUARANTEE

Specifications	QM1529
Display	2000 count
Measurement Cat.	Cat III 600V
Basic VDC Accuracy	0.800%
DC Voltage	200mV, 2V, 20V, 200V, 600V (± 0.8%)
AC Voltage	2V, 20V, 200V, 500V, 600V
DC Current	200µA, 2mA, 20mA, 200mA, 2A, 10A (± 3%)
AC Current	200µA, 2mA, 20mA, 200mA, 2A, 10A (± 3%)
Resistance	200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ, 20MΩ (± 1.5%)
AC Rectification	Average
Input Impedance	10MΩ
Special Features	Data hold, backlight, non-contact voltage
Battery / Fuse	2 × AAA / 200mA/600V (all included)
Dimensions	145(H) × 70(W) × 31(D)mm

This meter includes QUALITY Test Leads

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1529	$29.95	$26.95	$23.95

DIGITAL MULTIMETERS CONTINUED

Autoranging True RMS DMM with Non-Contact AC Detection

Our entry level True RMS Multimeter featuring autoranging, 1000V CAT III rating, Non contact voltage detection. With a sturdy construction and backlit display and quality test leads this is the perfect multimeter for an apprentice or novice hobbyist.

- Cat III 1000V
- 4000 count
- Overload protection
- Capacitance
- Frequency
- Min/max hold
- Backlight
- Auto power off

LIFE
LIFETIME GUARANTEE

Specifications	QM1321
Display	4000 count
Measurement Cat.	Cat III 1000V
Basic VDC Accuracy	1.5%
DC Voltage	40mV, 400mV, 4000mV, 40V, 400V, 1000V
AC Voltage	40mV, 400mV, 4000mV, 40V, 400V, 750V
DC Current	400µA, 4000µA, 40mA, 400mA, 4A, 10A
AC Current	400µA, 4mA, 40mA, 400mA, 4A, 10A
Resistance	400Ω, 4kΩ, 40kΩ, 400kΩ, 4MΩ, 40MΩ
Capacitance	10nF, 100nF, 1µF, 10µF, 100µF, 1mF, 10mF, 100mF
Frequency	10Hz, 100Hz, 1kHz, 10kHz, 100kHz, 1MHz, 10MHz
Inductance	-
Temperature	-
AC Rectification	True RMS
Input Impedance	10MΩ
Special Features	Backlight, min/max hold
Battery / Fuse	9V / 0-5A/1000V 10A/1000V (all included)
Dimensions	200(H) x 92(W) x 60(D)mm

This meter includes QUALITY Test Leads

Cat.	Qty 1+	Qty 3+
QM1321	$39.95	$35.95

Cat III DMM with Temperature

A budget-priced meter with everything you need - capacitance, temperature and 10A on AC and DC, compact and light weight with rugged moulded case.

- Non-contact voltage
- Duty cycle
- Backlight
- Rugged moulded case

LIFE
LIFETIME GUARANTEE

Case & K-probe included.

Specifications	QM1323
Display	4000 count
Measurement Cat.	Cat III 600V
Basic VDC Accuracy	0.5%
DC Voltage	400mV, 4V, 40V, 400V, 600V (± 0.5%)
AC Voltage	400mV, 4V, 40V, 400V, 600V (± 1.2%)
DC Current	4mA, 40mA, 400mA, 10A (± 2.5%)
AC Current	4mA, 40mA, 400mA, 10A (± 3%)
Resistance	400Ω, 4kΩ, 40kΩ, 400kΩ, 4MΩ, 40MΩ (± 1.2%)
Capacitance	4nF, 40nF, 4µF, 40µF, 100µF, (±3%)
Frequency	4kHz, 40kHz, 400kHz, 4000kHz, 10MHz
Temperature	-20°C to +760°C (±3%)
AC Rectification	Average
Input Impedance	10MΩ
Special Features	Non-contact voltage, duty cycle, backlight
Battery / Fuse	9V / F10A/250V, F500mA/250V (all included)
Dimensions	138(H) × 68(W) × 37 (D)mm

This meter includes QUALITY Test Leads

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1323	$49.95	$44.95	$39.95

DIGITAL MULTIMETERS CONTINUED

Cat IV True RMS Inductance/Capacitance DMM

Powerful frequency measurement with high accuracy, as well as capacitance up to 100mF!

It's a serious choice for serious tasks. Moulded case and the added facility of non-contact voltage detection.

- Cat IV 600V rated
- Backlit LCD
- Frequency
- Relative measurement
- Min / max
- Data hold
- Leads & K-type thermocouple included
- Inductance
- Capacitance

LIFE
LIFETIME GUARANTEE

Specifications	QM1552
Display	2000 count
Measurement Cat.	Cat III 1000V / Cat IV 600V
Basic VDC Accuracy	0.5%
DC Voltage	200mV, 2V, 20V, 200V, 1000V (±0.5%)
AC Voltage	200mV, 2V, 20V, 200V, 750V (±0.8%)
DC Current	200µA, 2mA, 20mA, 200mA, 2A, 10A (±1.0%)
AC Current	200µA, 2mA, 20mA, 200mA, 2A, 10A (±1.2%)
Resistance	200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ, 20MΩ, 200MΩ (±0.8%)
Capacitance	10nF - 100mF
Frequency	10Hz, 100Hz, 1kHz, 10kHz, 100kHz, 1MHz, 10MHz (±0.1%)
Inductance	2mH-20H
Temperature	-20°C to 1000°C / 0°F to 1832°F (±2-3%)
AC Rectification	True RMS
Input Impedance	10MΩ
Special Features	Non-contact voltage, back light, data hold, diode test, auto power off
Battery / Fuses	9V / 0.2A/500V, 10A/500V
Dimensions	200(L) × 92(W) × 60(D)mm

This meter includes QUALITY Test Leads

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1552	$69.95	$62.95	$55.95

Automotive DMM with Dwell and Tacho

Perfect for the workshop as an an engine analyser as well as basic DMM. Full dwell angle measurement and tacho, with max / data hold and bright backlit LCD.

- Dwell angle
- RPM x10
- Data hold
- Max hold
- Continuity & diode test
- Backlight
- Auto power off

LIFE
LIFETIME GUARANTEE

Specifications	QM1446
Display	2000 count
Measurement Cat.	Cat II 1000V / Cat III 600V
Basic VDC Accuracy	
DC Voltage	200mV, 2V, 20V, 200V, 1000V (± 0.8%)
AC Voltage	2V, 20V, 200V, 700V (± 1.0%)
DC Current	20mA, 200mA, 2A, 10A (± 1.5%)
AC Current	20mA, 200mA, 2A, 10A (± 1.8%)
Resistance	200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ, 20MΩ (± 1.0%)
Capacitance	40nF, 400nF, 4µF, 40µF, 100µF (± 3%)
Frequency	5Hz, 50Hz, 500Hz, 5kHz, 50kHz, 500kHz, 5MHz, 10MHz (± 1.2%)
Inductance	-
Temperature	-20°C to 1000°C / -4°F to 1832°F (± 5%)
AC Rectification	Average
Input Impedance	10MΩ
Special Features	Dwell angle, diode test, continuity test, engine revolutions, data hold, backlight
Battery / Fuses	2 x 1.5V AAA / 0.2A/250V 10A/250V
Dimensions	180(L) x 87(W) x 50(D)mm

This meter includes QUALITY Test Leads

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1446	$49.95	$44.95	$39.95

DIGITAL MULTIMETERS CONTINUED

Cat III True RMS Autoranging 4000 Count DMM with Temperature & Non-Contact AC Voltage Detection

A powerful true RMS multimeter that includes non-contact voltage testing, backlit LCD, and a carrying pouch. The rear of the unit has a foldout stand so you can sit the meter at a comfortable viewing angle on your desk, workbench or car. Powered by 1 × 9V battery (included).

- Backlit LCD
- Leads & K-type thermocouple included
- Automatic (-) Negative Polarity Indication
- Data Hold
- 30 Min Auto Power Off
- Carry/Storage Case For DMM & Leads

LIFE
LIFETIME GUARANTEE

Specifications	QM1551
Display	4000 count
Measurement Cat.	Cat III 600V
Basic VDC Accuracy	1.5%
DC Voltage	400mV, 4V, 40V, 400V, 600V (± 1.5%)
AC Voltage	400mV, 4V, 40V, 400V, 600V (± 2.0%)
DC Current	400µA, 4000µA, 40mA, 400mA, 10A (± 1.5%)
AC Current	400µA, 4000µA, 40mA, 400mA, 10A (± 1.8%)
Resistance	400Ω, 4kΩ, 40kΩ, 400kΩ, 4MΩ, 40MΩ (± 1.2%)
Capacitance	40nF, 400nF, 4µF, 40µF, 100µF (± 3%)
Frequency	5Hz, 50Hz, 500Hz, 5kHz, 50kHz, 500kHz, 5MHz, 10MHz (± 1.2%)
Temperature	-20°C to 760°C/ -4°F to 1400°F (± 3%)
AC Rectification	True RMS
Input Impedance	10MΩ
Special Features	Continuity, diode check, blue back lit LCD, non-contact voltage, foldout stand
Battery / Fuse	9V / 500mA/250V, F10A/250V (all included)
Dimensions	138(L) × 68(W) × 37(D)mm

This meter includes QUALITY Test Leads

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1551	$69.95	$62.95	$55.95

IP67 True RMS Autoranging Cat IV DMM

This is an excellent true RMS multimeter that features a large, easily read display and carries an IP67 environmental rating. This means the multimeter is waterproof and will not be damaged if accidentally dropped into water or left out in the rain. The meter has data hold and relative measurement capabilities and is housed in a robust, double moulded case. Includes leads, soft carry case and user manual. Double moulded case.

- IP67 Waterproof
- True RMS
- Auto Power-Off
- Backlight
- Data Hold & Relative Function
- Diode Test
- Autoranging
- Audible Continuity
- 10A Current Range

LIFE
LIFETIME GUARANTEE

Specifications	QM1549
Display	4000 count
Measurement Cat.	Cat IV 600V/Cat III 1000V
Basic VDC Accuracy	0.5%
DC Voltage	400mV, 4V, 40V, 400V, 1000V (± 0.5%)
AC Voltage	400mV, 4V, 40V, 400V, 1000V (± 0.8%)
DC Current	400µA, 4000µA, 40mA, 400mA, 10A
AC Current	400µA, 4000µA, 40mA, 400mA, 10A
Resistance	400Ω, 4kΩ, 40kΩ, 400kΩ, 4MΩ, 40MΩ (± 0.8%)
Capacitance	4nF, 40nF, 400nF, 4µF, 40µF, 100uF (±3%)
Frequency	Up to 10MHz
Inductance	-
Temperature	-
AC Rectification	True RMS
Input Impedance	10MΩ
Special Features	IP67, data-hold, relative measurement, backlight
Battery / Fuse	9V / F10A/1000V, F500mA/100V (all included)
Dimensions	182(H) x 82(W) x 55(D)mm

This meter includes QUALITY Test Leads

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1549	$99.95	$89.95	$79.95

DIGITAL MULTIMETERS CONTINUED

IP67 True RMS Autoranging Cat IV DMM with Wireless USB Interface

A quality true RMS multimeter with a wireless USB computer interface, non-contact voltage indicator, relative zero and data hold. Double moulded housing is impact resistant and quite durable, and IP67 waterproof rating makes this DMM capable of even the harshest conditions. Wireless USB interface and included logging software allow for computer based live data logging whilst keeping your computer completely isolated and protected.

- IP67 Waterproof
- True RMS
- Wireless USB Interface
- PC Logging Software
- Auto Power-Off
- Backlight
- Non-Contact Voltage
- Data Hold
- Diode Test
- Autoranging
- Audible Continuity
- 10A Current Range
- Double Moulded Case

LIFE
LIFETIME GUARANTEE

Specifications	QM1571
Display	4000 count
Measurement Cat.	Cat IV 600V / Cat III 1000V
Basic VDC Accuracy	0.5%
DC Voltage	400mV, 4V, 40V, 400V, 1000V (± 0.5%)
AC Voltage	400mV, 4V, 40V, 400V, 1000V (± 0.8%)
DC Current	400µA, 4000µA, 40mA, 400mA, 10A (± 1.2%)
AC Current	400µA, 4000µA, 40mA, 400mA, 10A (± 1.8%)
Resistance	400Ω, 4kΩ, 40kΩ, 400kΩ, 4MΩ, 40MΩ (± 0.8%)
Capacitance	40nF, 400nF, 4µF, 40µF, 100µF (±3%)
Frequency	4Hz, 40Hz, 400Hz, 4kHz, 40kHz, 400kHz, 4MHz, 10MHz (±1.5%)
Inductance	-
Temperature	-20°C to +760°C (±3.0%)
AC Rectification	True RMS
Input Impedance	10MΩ
Special Features	Wireless USB, IP67, True RMS, non-contact voltage
Battery / Fuse	9V / F10A/1000V, F500mA/100V (all included)
Dimensions	182(H) x 82(W) x 55(D)mm

This meter includes QUALITY Test Leads

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1571	$129.00	$115.95	$102.95

Bluetooth® True RMS Digital Multimeter

A stunning example of multimeter performance, with a rugged waterproof case to boot! Full auto ranging with high accuracy 6000 count display, as well as advanced maths functions. All the usual features like data hold, temperature, capacitance, and a few not-so-common features like duty cycle measurement. Bluetooth® connectivity provides a host of advanced monitoring and data logging functionality without fuss.

- Bluetooth® wireless
- True RMS
- 6000 count
- Cat IV 600V
- IP67 waterproof case
- Large backlit display
- Duty cycle measurement
- Relative measurement
- Min / max / avg functions
- Frequency measurement
- Capacitance
- Full autoranging

Bluetooth®

LIFE
LIFETIME GUARANTEE

Specifications	QM1578
Display	6000 count
Measurement Cat.	Cat IV 600V / Cat III 1000V
Basic VDC Accuracy	0.5%
DC Voltage	600mV, 6V, 60V, 600V, 1000V (± 0.9%)
AC Voltage	6V, 60V, 600V, 1000V (± 1.0%)
DC Current	60µA, 6000µA, 60mA, 600mA, 10A (± 1.0%)
AC Current	600µA, 6000µA, 60mA, 600mA, 10A (± 1.0%)
Resistance	600Ω, 6kΩ, 60kΩ, 600kΩ. 6MΩ, 60MΩ (± 1.5%)
Capacitance	60nF, 600nF, 6µF, 60µF, 600µF, 6000µF (± 5.0%)
Frequency	0.001Hz, 1kHz, 10kHz (± 1.0%)
Inductance	-
Temperature	-20°C to 760°C / -4°F to 1400°F (± 1.0%)
AC Rectification	True RMS
Input Impedance	10MΩ
Special Features	True RMS, duty cycle, IP67 case, Bluetooth® connectivity
Battery / Fuse	4xAAA, F800mA/1000V, F10A 1000V,
Dimensions	170(H) x 75(W) x 48(D)mm

This meter includes QUALITY Test Leads

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1578	$189.00	$169.95	$150.95

ANALOGUE MULTIMETER

Analogue Multimeter

Digital multimeters have almost completely taken over, but there are those who prefer to use the old analogue meter - it's perhaps still the best way to test a capacitor. This well-made meter has audible continuity and a transistor leakage test, in addition to the normal set of functions. Have a closer look at this meter. It's a beauty.

- Holster Included
- Audible Continuity
- 20KΩ/Volt
- Mirror backed scale to cancel paralax error

LIFE
LIFETIME GUARANTEE

This is the nicest analogue meter we have ever seen

Specifications	QM1020
Display	Analogue
Basic VDC Accuracy	3%
DC Voltage	100mV, 500mV, 2.5V, 10V, 50V, 250V, 1000V (±3.0%)
AC Voltage	10V, 50V, 250V, 1000V (±4.0%)
DC Current	50µA, 2.5mA, 25mA, 250mA, 10A (±3.0%)
Resistance	2kΩ, 20kΩ, 200kΩ, 2MΩ, 20MΩ (±3.0%)
AC Rectification	Average
Input Impedance	10MΩ
Special Features	dB, continuity buzzer.
Dimensions	150(L) x 100(W) x 35(D)mm

This meter includes QUALITY Test Leads

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1020	$29.95	$26.95	$23.95

SPECIALITY METERS

Multifunction Environment Meter with DMM

A multi-function environment meter that combines the functions of a sound level meter, light meter, humidity meter and temperature meter. Typical sound applications include checking acoustics of recording studios, auditoriums and professional hi-fi installations. The light and humidity meters are ideal for video photographers, greenhouse and hydroponic setups, etc. Others who should find this meter essential include interior designers, factory and office managers, record and archive keepers, schools, hospitals, laboratories and, of course, universities.

- Sound Level Meter
- Light Level Meter
- Indoor Temperature & Humidity Measurement
- Non Contact Voltage

LIFE
LIFETIME GUARANTEE

Specifications	QM1594
Display	4000 count
Measurement Cat.	Cat IV 600V / Cat III 1000V
Basic VDC Accuracy	0.5%
DC Voltage	400mV, 4V, 40V, 400V, 600V (± 1.0-1.5%)
AC Voltage	400mV, 4V, 40V, 400V, 600V (± 1.0-2.0%)
DC Current	400µA, 4000µA, 400mA, 10A (± 1.0-2.0%)
AC Current	400µA, 4000µA, 400mA, 10A (± 1.2-2.0%)
Resistance	400Ω, 4kΩ, 40kΩ, 400kΩ, 4MΩ, 40MΩ (± 1.5-2.5%)
Capacitance	50nF, 500nF, 5µF, 50µF, 100µF (±3.0-5.0%)
Frequency	5Hz, 50Hz, 500Hz, 5kHz, 50kHz, 500kHz, 10MHz (±1.5%)
Inductance	-
Temperature	-20°C to 750°C (±1.2%)
AC Rectification	Average
Input Impedance	10MΩ
Special Features	LUX, SPL, Humidity
Battery / Fuse	9V / F10A/600V, F500mA/600V (all included)
Dimensions	170(H) x 78(W) x 48(D)mm

This meter includes QUALITY Test Leads

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1594	$139.00	$124.95	$110.95

SPECIALITY METERS CONTINUED

DMM with Network Cable Tester

This innovative device is ideal for network installers or technicians & will allow the user to easily check cable integrity or measure AC & DC voltage, current, resistance, & continuity etc. without needing to carry two separate devices. The unit will check for cable continuity, opencircuits, short-circuits, & cross-connects etc. A remote terminator is included and enables the user to check network cables at a wall jack or patch panel. Supplied with loop back cable, LAN terminator & multimeter leads.

- Autoranging
- LAN Cable Tester
- Diode Test
- Multimeter Functions
- Audible Continuity
- Case Included
- LAN Tester Checks Faults & Missed Wired Conductors
- Manual Or Automatic Testing

LIFE
LIFETIME GUARANTEE

Specifications	XC5078
Display	2000 count
Measurement Cat.	Cat III 600V /Cat II 1000V
Basic VDC Accuracy	0.5%
DC Voltage	200mV, 2V, 20V, 200V, 600V (±0.5%)
AC Voltage	200mV, 2V, 20V, 200V, 600V (±1.2%)
DC Current	200µA, 2mA, 20mA, 200mA (±1.5%)
AC Current	200µA, 2mA, 20mA, 200mA (±2.0%)
Resistance	200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ, 20MΩ (±0.8%)
AC Rectification	Average
Input Impedance	10MΩ
Special Features	Data hold, max hold
Battery / Fuse	9V / 2 x AAA / F200mA/250V (all included)
Dimensions	162(L) x 74.5(W) x 44(D)mm

This meter includes QUALITY Test Leads

Cat.	Qty 1+	Qty 4+	Qty 10+
XC5078	$89.95	$80.95	$71.95

Cat III Insulation Tester/Multimeter

Commonly known as a megger and suitable for high voltage insulation testing up to 4 gigaohms at up to 1000V. It also has AC/DC voltage and low resistance multimeter functions. Moulded storage case and holster included.

- Analogue/Digital Display
- Data Hold
- Max/Min
- Moulded Case
- Backlit LCD
- Auto Power-Off
- Requires 6 X AA Batteries

LIFE
LIFETIME GUARANTEE

Specifications	QM1493
Display	4000 count
Measurement Cat.	Cat III 1000V
Basic VDC Accuracy	0.8%
DC Voltage	1000V (± 0.8%)
AC Voltage	750V (± 1.2%)
DC Current	-
AC Current	-
Resistance	400Ω (± 1.5%)
Capacitance	-
Frequency	-
Inductance	-
Temperature	-
AC Rectification	-
Input Impedance	-
Special Features	Insulation Resistance 4M, 40M, 400M, 4000M (± 2%), Continuity Test, Bargraph, Backlit, Data hold, Analogue Bargraph
Battery	6 x AA (included)
Dimensions	200(L) x 92(W) x 50(D)mm

This meter includes QUALITY Test Leads

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1493	$249.00	$219.00	$199.00

CLAMP METERS

CAT III 600V True RMS AC and DC Clamp Meters

- True RMS
- Capacitance
- Temperature
- Relative Measurement
- Backlight
- Max. Value
- Data Hold
- Resistance
- Frequency Measurement
- Non-Contact Voltage Testing
- Input Impedance: 10MΩ
- Basic VDC Accuracy: 0.5%
- 72(W) x 194(H) x 35(D)mm
- Carry case included
- 3 x AAA Battery Required

600A TRUE RMS AC

- AC Current - 600A

Ideal for basic AC current measurement. Compact unit at a great price.

QM1630

LIFE

LIFETIME GUARANTEE

600A TRUE RMS AC/DC

- DC Current - 600A
- AC Current - 600A

Includes DC current measurement with high accuracy, from a compact unit. This is a price breakthrough for a DC-current capable clamp meter!

QM1632

LIFE

LIFETIME GUARANTEE

1000A TRUE RMS AC/DC

- DC Current - 1000A
- AC Current - 1000A

Fantastic features at an an amazing price. Ultra-high current 1000A AC and DC current measurement.

QM1634

LIFE

LIFETIME GUARANTEE

These meters include QUALITY Test Leads

Specifications	QM1630	QM1632	QM1634
Display	4000 count	4000 count	6000 count
DC Voltage	400mV, 4V, 40V, 400V, 600V (±0.5%)	400mV, 4V, 40V, 400V, 600V (±0.5%)	600mV, 6V, 60V, 600V, 1000V (±0.5%)
AC Voltage	400mV, 4V, 40V, 400V, 600V (±0.8%)	400mV, 4V, 40V, 400V, 600V (±0.8%)	600mV, 6V, 60V, 600V, 750V (±0.8%)
DC Current	-	40A, 400A, 600A (±2.5%)	60A, 600A, 1000A (±2.5%)
AC Current	40A, 400A, 600A (±2.5%)	40A, 400A, 600A (±2.5%)	60A, 600A, 1000A (±2.5%)
Resistance	400Ω, 4KΩ, 40kΩ, 400kΩ, 4MΩ, 40MΩ (±1.0%)	400Ω, 4KΩ, 40kΩ, 400kΩ, 4MΩ, 40MΩ (±1.0%)	600Ω, 6kΩ, 60kΩ, 600kΩ, 6MΩ, 60MΩ (±1.0%)
Capacitance	10nF, 100nF, 1μF, 10μF, 100μF, 1mF, 10mF, 100mF (±4.0%)	10nF, 100nF, 1μF, 10μF, 100μF, 1mF, 10mF, 100mF (±4.0%)	10nF, 100nF, 1μF, 10μF, 100μF, 1mF, 10mF, 100mF (±4.0%)
Frequency	10Hz. 100Hz, 1kHz, 10kHz, 100kHz, 1MHz, 10MHz (±0.5%)	10Hz. 100Hz, 1kHz, 10kHz, 100kHz, 1MHz, 10MHz (±0.5%)	10Hz. 100Hz, 1kHz, 10kHz, 100kHz, 1MHz, 10MHz (±0.5%)
Temperature	-20°C to 1000°C / 0°F to 1800°F (±5.0%)	-20°C to 1000°C / 0°F to 1800°F (±5.0%)	-20°C to 1000°C / 0°F to 1800°F (±5.0%)

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1630	$59.95	$53.95	$47.95

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1632	$89.95	$80.95	$71.95

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1634	$129.00	$115.95	$102.95

MULTIMETER ACCESSORIES

Fast Acting Cartridge Fuses

FOR USE IN MULTIMETERS

Used in many well-known multimeters including Listed by Underwriters Laboratories and certified by CSA. Fast acting fuse designed for use in circuits with high AC fault current capacity.

600V 15A (SUITS FLUKE) Cat. SF2274

600V 1A (SUITS FLUKE) Cat. SF2276

Spare ferrule fuses for our IP67 CAT IV rated DMMs:

1000V 500MA 3AG Cat. SF2278

1000V 800MA 3AG Cat. SF2279

1000V 10A Cat. SF2277

Spare fuses for selected Digitech DMM:

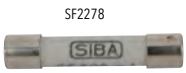
600V 500MA M205 Cat. SF2269

500V 10A 3AG Cat. SF2272

Note: Not stocked in all stores, but can be ordered.

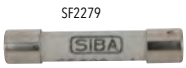
SF2274

SF2278



SF2272

SF2279



SF2276

Suits Fluke DMMs

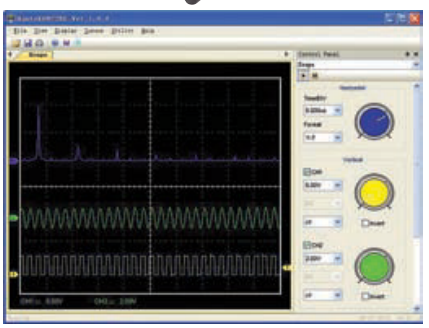
Size(mm)	Current	Voltage	Cat.	Qty 1+	Qty 3+	Qty 6+
20 x 5.0	0.5A	600V	SF2269	$3.95	$3.55	$3.15
32 x 6.3	0.5A	1000V	SF2278	$9.95	$8.75	$7.75
32 x 6.3	0.8A	1000V	SF2279	$9.95	$8.75	$7.75
35 x 10	1A	600V	SF2276	$9.95	$8.95	$7.95
32 x 6.3	10A	500V	SF2272	$9.95	$8.75	$7.75
38 x 10	10A	1000V	SF2277	$14.95	$13.35	$11.70
38 x 10	15A	600V	SF2274	$17.95	$15.95	$14.35

USB OSCILLOSCOPE

20MHz USB Oscilloscope

This unit does away with more of the hardware and provides a highly accurate interface to allow software to provide the display. It still provides 20MHz bandwidth and high accuracy and physical probe couplings, but takes up a fraction of the bench-space. Use the included software to provide just about all standard oscilloscope functions, and even output waveforms to excel/word files. Convenient function in a small form factor, ideal for the traveling or compact workbench.

- USB interface plug & play
- Automatic setup
- Waveforms can be exported as Excel/Word files
- Spectrum analyser (FFT)
- Cursor measurements



Specifications	QC1929
Channels	2
Input Impedance	1MΩ
Bandwidth	20MHz
Sampling Rate	48M Sa/Sec
Input Coupling	DC
Max Input Voltage	±5V
Triggers	Rising edge falling edge
Trigger Modes	Auto, Normal, Single
Math Operations	Add / subtract / multiply / divide / FFT
Sensitivity	20mV/div - 5V/div
Resolution	8bit
DC Accuracy	+/- 3%
Operating System	Windows XP/Vista/7/8/10
Dimensions	206(W) x 123(D) x 37(H)mm
Weight	375g
Accessories	1x10:1/100:1 probe, software, USB cable

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 2+	Qty 5+
20MHz USB Oscilloscope	QC1929	$199.00	$178.95	$158.95

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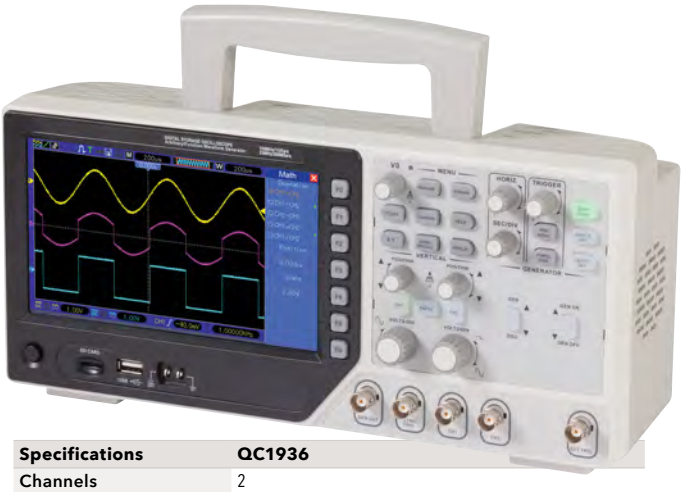
DIGITAL STORAGE OSCILLOSCOPES

100MHz Dual Channel Oscilloscope with Digital Storage

This is a lightweight and compact unit featuring a large 7-inch colour-LCD for detailed readings. It also includes a waveform generator for various testing applications. By connecting to it to your computer via the provided USB cable, you can use the included software for even greater control and data storage options.

- Two channel
- High accuracy
- Powerful Trigger
- Independent Waveform generator
- Synchronized signal Output/Input
- USB host and device connectivity
- Supports SD card

See website for full specifications.



Specifications	QC1936
Channels	2
Bandwidth	100MHz
Sampling Rate	1G Sa/Sec
Input Coupling	AC / DC / GND
Max Input Voltage	CAT II 300VRMS AC/DC Max
Triggers	Edge, Video, Pulse Width, Pulse, Slope, Over time, Alternative
Trigger Modes	Auto, Normal, Single
DC Accuracy	+/- 3%
Data Record Function	Yes
Memory Depth	40K
DISPLAY	
Type	7" colour TFT LCD
Resolution	800 x 480
Contrast	Adjustable
Graticule	8 x 16 div
VERTICAL	
Sensitivity	2mV - 5V/div
Resolution	8 bit
Rise time	3.5ns
Mathematical operations	Add / subtract / multiply / divide / FFT
FFT	Hanning, Flattop, Rectangular, Bartlett, Blackman
HORIZONTAL	
Time Base	4ns/div to 40s/div
WAVEFORM GENERATOR	
Frequency range	1Hz-25MHz
Waveforms	Sine, Square, Ramp, Trapezium, AM/FM, Arbitrary, Exponent
Resolution	12 bits
Depth	4KSa

	Cat.	Qty 1+	Qty 2+	Qty 5+
100MHz Dual Channel Oscilloscope	QC1936	$899.00	$809.00	$719.00

Not Sure What To Buy?
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gift card jaycar

OSCILLOSCOPE & DMM ACCESSORIES

OSCILLOSCOPE PROBE

Oscilloscope Probe - 10:1 / 1:1

Passive high impedance oscilloscope probe designed and calibrated for use with instruments having an input impedance of 1MΩ shunted by 20pF. It may be compensated for use with instruments having an input capacitance of 15 to 35pF. The probe incorporates a three-position slide switch in the head, which selects attenuation of x1, x10 or a ground reference position. This probe suits all of the oscilloscopes in our range. Supplied with sprung hook, channel identifier clip, ground lead, insulating tip, IC tip and adjusting tool.

POSITION REF
Probe tip grounded via 9M-Ω resistor, oscilloscope input grounded.

Specifications	Position x10	Position x1
Attenuation Ratio	10:1	1:1
Bandwidth	DC to 100MHz	
Rise Time	3.5ns	
Input Resistance	10MΩ when used with oscilloscopes with 1MΩ input	1MΩ (oscilloscope input resistance)
Input Capacitance	14pF (approx.)	
Compensation Range	10 to 35pF	
Working Voltage	300VDC incl. Peak AC derating with frequency	600V incl. Peak AC derating with frequency
Cable Length	1.4m	
Certification	Safety Meets IEC1010-1 Cat.I	

Cat.	Qty 1+	Qty 2+	Qty 5+
QC1902	$39.95	$35.90	$31.90

BENCH VOLTMETER

Analogue Bench Voltmeter 0-15V

A handy bench voltmeter with analogue dial and banana plug connections. Reminiscent of the voltmeters you might see in a school physics lab, this voltmeter gives a quick and easy to read display of volts, and is ideal as a permanent fixture on a test bench, with a 15V maximum reading be suitable for automotive part testing.

- Choose either 3V or 15V scales via separate banana plugs
- 3V scale reads -1V to 3V
- 15V scale reads -5V to 15V
- Zero offset adjust
- Analogue movement
- Internal resistance:
  3kΩ (3V scale)
  12kΩ (15V scale)

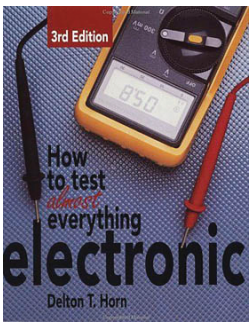
Cat.	Qty 1+	Qty 3+	Qty 6+
QP5040	$19.95	$17.95	$15.95

How to Test Almost Everything Electronic

BOOK

Electronics is a unique science - everything that's going on has to be deduced from visible symptoms and effects with very little that is actually physically observable. The book covers everything from setting up a test and work area to using the most important types of test equipment - multimeters, oscilloscopes, signal generators, signal tracers, capacitance meters and frequency counters. It also covers testing and measurement methods, fault finding without circuit diagrams, component testing and some highly specialised measurement in applications such as audio and TV. A comprehensive volume that should be on every technical bookshelf.

- Softcover 326 pages 190 x 130mm



Cat.	Qty 1+
BM7200	$54.95

TEST EQUIPMENT ACCESSORIES

Multimeter Carry Case

Hard wearing and good looks make this multimeter case perfect for protecting your valuable multimeter from harm. With foam lining to cushion the meter, it zips up tight guarding it from dirty, dusty conditions.

- Dimensions:
  190(L) x 125(W) x 45(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Carry Case	HB6361	$8.95	$8.05	$7.15

Retractable 3m Alligator Test Lead Set

Set of 3 heavy duty leads in red, black, and green terminated with insulated alligator clips in a handy retractable reel. 3m in length, it is ideal for testing and troubleshooting electronic systems by connecting from components in machinery to test equipment or bypassing long wiring to isolate a fault.

- Rating when wound: 6A
- Rating when unwound: 10A
- Lead Length: 3m
- Reel Dimensions:
  152(Dia.) x 20(W)mm

	Cat.	Qty 1+	Qty 4+	Qty 10+
3m long	WT5334	$29.95	$26.90	$23.70

Jumper Lead Kits

STANDARD

Ideal for connecting devices for testing. Alligator clip size is approx 40mm, jaw opening is about 8mm and cable length is approx 400mm.

- 10 leads supplied
  2 of each colour

HEAVY DUTY

This kit has large alligator clips and heavy cable. The alligator clips are approximately 50mm long, and have jaw openings of about 10mm. Cable length is approx 300mm.

- 10 leads supplied, 2 of each colour

	Cat.	Qty 1+	Qty 10+	Qty 50+
Standard	WC6010	$7.95	$7.15	$6.35
Heavy Duty	WC6020	$12.95	$11.45	$9.95

High Quality Banana Piggyback Test Leads

A set of factory-moulded piggy-back style banana plugs, each connected by one metre of high-quality, ultra-flexible 500VDC, 12A rated cable.

- Contains 2 x black, 2 x red and 1 each of blue, yellow and green leads - 7 in all

	Cat.	Qty 1+	Qty 3+	Qty 6+
7 x 1m long	WT5326	$29.95	$26.95	$23.95

For next day delivery, or Click and Collect, see page A4

TEST & JUMPER LEADS

Parrot™ Clip Leads

The Parrot™ Clip is the only test probe that provides both clip-on hands free contact as with an EZ-hook and normal point contact like a test probe. These feature a sprung hook, which is soldered directly to the lead and housed inside a round metal tube. The grip is performed between the 2 metal parts, which can be used as pincers if required. Probes are supplied with 1m leads terminated to banana plugs and are fully insulated to 1000V.

	Cat.	Qty 1+	Qty 3+	Qty 6+
1m long	WT5330	$29.95	$26.95	$23.95

Multimeter Probe Alligator Clips

Turn your DMM probes into clips! These alligator clips simply push onto the end of the test probes!

- Length approximately 55mm
- Jaw opening 8mm
- Sold as a pair - 1 red, 1 black

	Cat.	Qty 1+	Qty 3+	Qty 6+
Pair	WT5220	$4.95	$4.45	$3.95

16 Piece Test Lead Set

Consists of two leads with screw sockets on each end. Attachments screw in.
All colour coded red and black.

- 4 x alligator clips
- 4 x 2mm pin tips
- 4 x banana plugs
- 2 x spade lugs

	Cat.	Qty 1+	Qty 3+	Qty 6+
16 Piece	WT5218	$14.95	$13.45	$11.95

Multimeter Test Probes Shrouded Type

- Banana plugs are right angle with 15mm covered pin
- Alligator clips included

	Cat.	Qty 1+	Qty 3+	Qty 6+
Shrouded Type	WT5325	$17.95	$15.95	$13.95

2mm Test Probes for Multimeters

- Sold as a pair

	Cat.	Qty 1+	Qty 3+	Qty 6+
Black / Red Pair	PP0425	$4.95	$4.45	$3.95

Multimeter Test Probes

With 4mm right angle unshrouded banana plugs.

- Suits QM1500, etc.

	Cat.	Qty 1+	Qty 3+	Qty 6+
Unshrouded - 930mm long	WT5316	$5.95	$5.35	$4.75

CAT IV Test Lead Set

CAT IV test lead set with straight banana plugs.

	Cat.	Qty 1+	Qty 3+	Qty 6+
Pair	WT5333	$13.95	$12.45	$10.95

Professional Cat IV Multimeter Probes

Professional multimeter test probes have always been an expensive choice so what we've done is work closely with a manufacturer to get great quality probes at a genuinely affordable price! To start with, we've made them extra long; they're 1200mm long so you don't drag your meter across your workbench as you move around a circuit and makes them perfect for bench top meters. They're Cat IV rated for safety, feature finger guards and can handle 20A of current. The best part is the actual probes themselves. To start with, the probes are suitable for inserting into a standard 4mm banana socket using the same spring hold system. Also included are probe covers which not only stop the sharp points being dangerous, they allow only just the tip to be exposed for delicate work where you can be in danger of making a short between two connections which are close together. Probes suitable for inserting (and holding) in 4mm banana sockets. Probe safety cover with slot for delicate work. Comfortable and ergonomic grip.

- Extra long 1200mm
- 600V Cat IV rated
- 20A current rating
- Sold as a pair.

	Cat.	Qty 1+	Qty 3+	Qty 6+
Pair	WT5338	$24.95	$22.45	$19.95

EZ Hook Test Clips - 40mm

Suitable for ICs, transistors, PC pins, etc. Push syringe action. Hirshmann style.

	Cat.	Qty 1+	Qty 10+	Qty 50+
Black	HM3037	$1.75	$1.55	$1.40
Red	HM3036	$1.75	$1.55	$1.40

IC Test Clips - 57mm

These have a syringe action and are ideal for working with small components.

- Length: 57mm

	Cat.	Qty 1+	Qty 10+	Qty 50+
Black	HM3041	$1.95	$1.75	$1.55
Red	HM3040	$1.95	$1.75	$1.55

Test Leads

Banana plugs to clip. There are many situations where multimeter probes are difficult to use.

	Cat.	Qty 1+	Qty 3+	Qty 6+
700mm long	WT5320	$6.50	$5.85	$5.20

Alligator Clips

- Sold as a pair
- 1 x red & 1 x black

		Cat.	Qty 1+	Qty 10+	Qty 50+
26mm	Pair	HM3020	$1.75	$1.55	$1.40
32mm	Pair	HM3022	$2.25	$2.00	$1.80

Alligator Clips with Screw

No soldering required. Large alligator clips with plastic finger grips and a screw for connection.

- Length: 55mm
- Max jaw opening 12mm

	Cat.	Qty 1+	Qty 10+	Qty 50+
Pair	HM3025	$2.95	$2.65	$2.35

Cat III Rated Banana Alligator Clips

Takes standard and fully insulated 4mm banana plugs and turns them into an alligator clip. CATIII rated.

- Sold as a pair, red and black.

	Cat.	Qty 1+	Qty 10+	Qty 50+
Pair	PA3696	$12.95	$11.45	$9.95

p.A65 - alligator clip jumper leads

NON-CONTACT THERMOMETERS

Economy Non-Contact Thermometer

A safe way to measure temperatures in hard to reach places, and hot or hazardous areas. It is compact and easy to use - simply aim the built-in laser at the target area and read the temperature between -50°C to 500°C from the backlit LCD screen. Features include a 12:1 distance to spot ratio, rapid 500ms detection, max/min, data hold, and auto-power off functions.

- -50°C to 500°C
- Rapid detection function
- Built-in laser pointer
- 12:1 Distance to spot ratio
- Automatic data hold
- Max/min function

Specifications	QM7410
Display	4 digits
Optical Resolution	12:1
Temperature	-50°C to 500°C
Emissive	0.95
Sampling Rate	500ms
Special Features	Data Hold & Min Max Function
Battery	9V
Dimensions	96(W) x 131(H) x 35(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
12:1 distance to spot ratio	QM7410	$49.95	$44.95	$39.95

Pro High Temperature Non-Contact Thermometer with K-Type Probe Support and USB

A professional non-contact thermometer with dual laser pointers to provide fast, easy and accurate readings of most surface temperatures between -50°C to 1650°C! The impressive 30:1 distance to spot ratio measures smaller surface areas at greater distances, with a 1% accuracy and a rapid 150ms sampling time. Features include automatic data hold & trigger lock, min, max, difference, average temperature displays, high/low alarms, and digitally adjustable emissivity (0.1 to 1.0) for more accurate readings of different materials. Provision for a K-Type thermocouple (supplied) enables you to take direct measurements up to 1370°C, and a USB port lets you transmit the data with a PC for further analysis. Supplied with a tripod, K-type probe, USB cable and carry case.

- Rapid detection function
- Built-in dual laser pointer
- 30:1 Distance to spot ratio
- Automatic Data Hold
- Emissivity Digitally adjustable from 0.10 to 1.0
- MAX, MIN, AVG, DIF temperature displays
- Backlight LCD display
- Trigger lock
- Set high and low alarm
- USB Interface
- Class 2 laser product

Specifications	QM7430
Display	4 digits
Optical Resolution	30:1
Temperature	-50°C to 1650°C
Emissive	0.1 + 1.0
Sampling Rate	150ms
Special Features	USB Interface & K-Type Thermocoupler Support
Battery	9V
Dimensions	155(W) x 204(L) x 53(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
30:1 distance to spot ratio	QM7430	$249.00	$219.00	$199.00

BODY THERMOMETERS

Non Contact Body Thermometer

Get fast and accurate temperature readouts via the infrared sensor without needing to come in contact with the source. Simply press the measure button and the result will be displayed on the large backlit LCD display in less than a second. Unit can switch between object and body to allow you to measure liquids, such as baby milk, surfaces and even air temperature. Automatic fever alarm above 37.3°C, switchable between Centigrade and Fahrenheit, accurate to +/-0.2°C.

- 34°C - 43°C temperature range (Body mode)
- 0°C - 100°C temperature range (Object mode)
- Automatic fever alarm above 37.3°C

Body temperature mode

Specifications	QM7422
Temperature	Body mode: 34°C to 43°C Object mode: 0°C to 100°C
Accuracy	+/- 0.2°C
Measuring Distance	1-5cm
Special Features	Automatic fever alarm above 37.3°C
Battery	2 x AAA required
Dimensions	138(L) x 95(W) x 40(H)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
QM7422	$69.95	$62.95	$55.95

MINI NON-CONTACT THERMOMETER

Mini Non-Contact IR IP67 Thermometer

Ultra compact, non-contact thermometer. IP67 rated so is ideal for industrial and lab applications. LCD readout gives temperature in Celsius or Fahrenheit.

- Batteries & lanyard included

Specifications	QM7218
Temperature	-33°C to 110°C (-27°F to 230°F)
Accuracy	2.5°C
Distance To Spot Ratio	1:1
Response Time	1 second
Size	Length: 90.0mm Diameter: 19.0mm

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
1:1 distance to spot ratio	QM7218	$49.95	$44.95	$39.95

Tech talk

DISTANCE TO SPOT RATIO EXPLAINED

Distance to spot ratio is the ratio of the distance of the Thermometer to the object being measured, and the diameter of the temperature measurement area. The larger the ratio number the better the resolution.

HANDHELD THERMOMETERS & THERMOCOUPLES

Digital Thermometer with K-Type Thermocouple

A handy pocket-size digital thermometer, suitable for the lab, workshop or in the field. It features an excellent measurement range from -50°C to 750°C and a hold function to lock the reading on the display.

- LCD
- Pocket Size
- Wide Temperature Range
- Thermocouples included
- Battery included

1 YEAR WARRANTY

Specifications	QM1602
Display	2000 count
Temperature	-50°C to 750°C (±1%)
Sampling Rate	2.5Hz
Special Features	Data hold
Battery	2 x AA (supplied)
Dimensions	128(L) x 61(W) x 25(D)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1602	$44.95	$39.95	$35.95

Thermocouple Thermometer with 2 Inputs

Fast response and laboratory accuracy, works with K-type thermocouples and offers 0.1° or 1° user-selectable resolution over the entire measurement range. You can monitor two separate temperatures or use the differential function to compare them.

- Auto power off & backlit LCD
- Max and hold function
- Celsius & Fahrenheit
- Holster included
- Thermocouples included

1 YEAR WARRANTY

Specifications	QM1601
Display	2000 count
Temperature	-50°C to 1300°C (-58°F to 2000°F)
Special Features	Back light, data hold, max hold
Battery	1 x 9V
Dimensions	162(L) x 76(W) x 39(D)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1601	$99.95	$89.95	$79.95

Probe K Type Thermocouple

This plug in thermocouple probe allows you to measure external temperature readings on DMMs. It will measure from below minus 50°C to above 250°C depending on the DMM it is used with.

- Suitable for gas and liquid, both with good accuracy of 0.75%.

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1282	$14.95	$13.35	$11.70

Wire K Type Thermocouple with Twin Banana Plugs

Similar to our other thermocouples, this one is fitted with banana plug terminations but does not have a "probe" assembly. The thermocouple junction will measure over a wide range of temperature but this will depend on the DMM.

- Typical thermocouple measurement range from as low as -50°C to over 1200°C

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1284	$11.95	$10.70	$9.50

Wire K Type Thermocouple

This is essentially the same as the probe type shown on this page, except that the sensor is mounted on the end of the cable - no probe. Suits digital multimeters.

- Measures from below minus 40°C to over 1200°C, actual range depends on the DMM it's used with.

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1283	$11.95	$10.70	$9.50

USB TEMPERATURE / HUMIDITY DATALOGGERS

A must for anyone involved with food preparation, archiving or storage or applications where storage of environment information is important. These USB dataloggers log temperature and humidity readings and store them in internal memory for later download to a PC. The measurement interval is adjustable - you simply set up the recording parameters then download the data when you need it. The data is recorded at the prescribed intervals and will alert you if preset min/max levels are exceeded. Countless applications including greenhouses, museums, warehouses, container storage, photography, archives, food preparation etc.

Direct Plug In Type

- 32,000 sample memory (16,000 temp, 16,000 humidity)
- Easy USB interface
- Mounting bracket included
- Software compatible with Windows 2000, XP, Vista

1 YEAR WARRANTY

Specifications	QP6013
Range	-40°C to 70°C (-40°F to 158°F), 0 - 100% relative humidity
Accuracy	Humidity ±3%, Temperature ±1%
Resolution	Humidity 0.1%, Temperature 0.1°C
Memory	32,000 samples
Battery Life	5 sec rate: 12 months, 10 sec rate: 2.5 years
Dimensions	100(L) x 22(W) x 20(H)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Direct Plug In Type	QP6013	$119.00	$106.95	$94.95

USB / LCD Readout Type

- 32,700 sample memory
- Adjustable measurement cycle
- Analysis software included
- Software compatible with Windows 2000, XP, Vista

1 YEAR WARRANTY

Specifications	QP6014
Range	-40°C to 70°C (-40°F to 158°F), 0 - 100% relative humidity
Accuracy	Humidity ±3%, Temperature ±1%
Resolution	Humidity 0.1%, Temperature 1°C
Memory	32,700 samples
Measurement Cycle	1s - 24h
Dimensions	95(L) x 50(W) x 32(H)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
USB / LCD Readout Type	QP6014	$149.00	$133.95	$118.95

PROBE THERMOMETERS

LCD Probe Thermometer

Multi-purpose digital thermometer for the kitchen, lab, factory, workshop or barbeque. It measures in Celsius and Fahrenheit and fits in a pocket.

- Stainless steel probe
- Pocket clip

Specifications	QM7314
Temperature	-50°C to 300°C , -58°F to 572°F (±1°C , ±2°F)

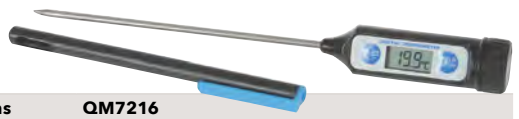
Length	Cat.	Qty 1+	Qty 3+	Qty 6+
150mm	QM7314	$10.95	$9.85	$8.75

Digital Stem Thermometer

Endless applications such as food processing, laboratory work, photography, home brewing etc. This digital thermometer features fast response, min/max memory, data hold and automatic shut-off after 10 minutes. The probe is stainless steel, so it will never corrode, the body is splashproof and it will never need calibration.

- Requires LR44 battery (included) / 5000 hour battery life

1 YEAR WARRANTY



Specifications	QM7216
Temperature	-50°C to 200°C / -58°F to 392°F (±1°C , ±2°F)
Display Resolution	0.1°
Sampling Rate	Every 0.7 seconds

Length	Cat.	Qty 1+	Qty 3+	Qty 6+
205mm	QM7216	$29.95	$26.95	$23.95

FRIDGE THERMOMETERS

Digital Fridge/Freezer LCD Mini Thermometer

See at a glance that your favourite food or beverage is at the correct temperature in the fridge or freezer. Hang it from a wire shelf, stand on a shelf or attach to a metal surface with the built-in magnet. Stylish design with white face and silver colour surround. Selectable °C & °F.

1 YEAR WARRANTY

Specifications	QM6323
Digit Height	23mm
Temperature Range	-19°C to 49°C
Batteries	1 CR2025 included
Dimensions	68(L) x 44(H) x 12(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
	QM6323	$11.95	$10.45	$9.45

Digital Thermometer for Fridge or Freezer

Simply attach the sensor in the fridge or freezer and the thermometer on the outside with the attached magnets or enclosed hook and loop strip. Set your preferred reading of °C or °F and then set the minimum and maximum temperatures with the alarm. If the fridge goes below or above these set temperatures the alarm will sound until you manually turn it off to investigate the problem. 1m cable.

- Shows room temperature at the touch of a button

Specifications	QM7209
Room Temp Range	-10°C to 50°C
Fridge Temp Range	-50°C to 70°C
Display Size	26(W) x 13(H)mm
Requires	1 x AAA battery (supplied)
Dimensions	67(W) x 39(H) x 15(D)mm

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
	QM7209	$24.95	$22.45	$19.95

Dual Display Digital Thermometer for Fridge Freezer with Dual Probes

NEW

This Dual display Fridge/Freezer Thermometer will help keep food fresh and accurately stored in all zones of the fridge or freezer. The bold LCD screen provides an instant reading in either Celsius or Fahrenheit, in two zones of the fridge/freezer. Simply place each suction cup probe in the required zone, and then place the reading screen in a handy location, for instant reading of your food storage temperature. The dual digital thermometer will let you set the maximum and minimum temperatures you require and sound an alarm when it deviates from the range. This clever fridge/freezer thermometer will take the guesswork out of storing your food at the correct temperature and give you peace of mind that your food is fresh and ready to eat.

Specifications	QM7322
Display	90(W) x 16(H)mm
Temperature Range	-40°C to 70°C
Power	2 x AAA batteries (included)
Cable Length	1m
Dimensions / Weight	135(W) x 45(H) x 23(D)mm, 85g

	Cat.	Qty 1+	Qty 3+	Qty 6+
	QM7322	$39.95	$35.95	$31.95

DESKTOP THERMOMETERS

Indoor Desk Thermometer

Handy desk or table-top thermometer. Measures degrees Celsius with high and low memory. Tilting bail for standing on desk.

- Battery included

Specifications	QM7316
Range	-20°C to 50°C
Dimensions	64(W) x 72(H) x 18(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Indoor Version	QM7316	$7.95	$7.15	$6.35

Jumbo Display In/Out Thermometer

One display that shows both the inside and outside temperatures simultaneously. It will also record the minimum and maximum temperatures. The outside temperature sensor is waterproof and is on a 3m cable. It also has a tilting bail for standing as well as a keyhole for wall mounting. Easy to read jumbo digits.

1 YEAR WARRANTY

Specifications	QM7310
Temperature Range	-39.9°C to 49.9°C (-39.8°F to 122°F)
Battery	Requires AA
Dimensions	95(W) x 140(H) x 22(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Jumbo Display	QM7310	$19.95	$17.95	$15.95

Jumbo Display Thermometer / Hygrometer

Displays the temperature and humidity together on the one huge LCD display. It also has a min / max function (memory).

1 YEAR WARRANTY

Specifications	QM7312
Humidity	10 - 99% +/-5%
Temperature Range	-10°C to 60°C (14°F to 140°F)
Battery	Requires AAA
Dimensions	135(H) x 100(W) x 22(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Jumbo Display	QM7312	$26.95	$23.95	$21.45

Wireless In/Out LCD Thermometer

Keep an eye on the outdoor and indoor temperature with ease. This thermometer is comprised of two parts. An LCD display/receiver to keep inside and a wireless outdoor temperature sensor which transmits the outdoor temperature back to the display. Great for monitoring computer server rooms, wine cellars, effectiveness of housing insulation, or for simply wanting to know the differentiation in temperature.

- No need to expose the LCD to the elements

1 YEAR WARRANTY

Specifications	XC0321
Temperature Range	Indoor: 0°C to 60°C Outdoor: -40°C to 60°C
Batteries	Display: Requires 2 x AAA Remote: Requires 2 x AAA
Transmission Freq.	433.92MHz
Dimensions	Receiver: 86(H) x 57(W) x 18(D)mm, Sensor: 68(H) x 50(W) x 21(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Thermometer	XC0321	$19.95	$17.95	$15.95

Wireless In/Out Thermometer/Hygrometer

An advanced thermometer/hygrometer capable of measuring indoor and outdoor temperature, as well as relative humidity. The large easy to read LCD acts as a receiver unit for a separate outdoor sensor unit. It will record maximum and minimum temperatures for quick referral and conveniently displays the time of day. Ideal for temperature or humidity sensitive environments such as museums, greenhouses, or to check if your home and office is too dry or moisture laden. The LCD receiver unit is capable of receiving information from up to 3 sensor units, which are available separately (Cat. XC0324).

Specifications	XC0322
Temperature Range	Indoor: 0°C to 60°C Remote: -45°C to 65°C
Humidity Range	1% to 99%
Transmission Freq.	433.92MHz
Transmission Range	Up to 100m open air
Power	Receiver: Requires 2 x AA, Remote: Requires 3 x AAA
Dimensions	Receiver: 95(H) x 114(W) x 25(D)mm Sensor: 51(H) x 63(W) x 25(D)mm

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
Thermometer/Hygrometer	XC0322	$39.95	$35.95	$31.95
Extra Sensor	XC0324	$24.95	$22.45	$19.95

ENVIRONMENT MEASUREMENT

Pocket Moisture Meter - Wood, Building, Etc.

This is an intelligent wood moisture meter suitable for measuring water content in building materials and wooden fibre articles such as wooden and bamboo objects, cotton, paper etc. Simple to use, the unit comes with two-pin electrode which enables you to check thick wood at the core without having to cut it open. A must have for home/building inspectors, flooring specialist and general contractors.

- Carry case included.
- Backlit digital LCD screen
- Ergonomically designed with comfortable finger grip
- Low power consumption
- Auto power off

1 YEAR WARRANTY

Specifications	QP2310
Electrode Length	8mm
Measuring Range	Wood: 6 to 44%, Material: 0.2 to 2.0%
Accuracy	Wood +/-2%, Material: +/-0.2%
Ambient Temperature	0°C to 50°C
Ambient Humidity	0 to +85%RH
Battery	4 x LR44 (included)
Dimensions	96(H) x 40(W) x 20(D)mm, 83g

	Cat.	Qty 1+	Qty 3+	Qty 6+
Pocket Moisture Meter	QP2310	$39.95	$35.95	$31.95

Hand Held pH Meter

A simple and accurate device for checking pH levels in water. The unit is equally valuable for keeping your fish tank at the proper pH level for optimum fish health or checking your swimming pool for the right balance. The meter is simple to use and the large liquid crystal display gives clear and precise readings that are much more accurate than messy chemicals. The unit has an extendable probe that can be adjusted to suit each application. The meter is supplied with a 9 volt battery, a bottle of pH 7.0 buffer solution and calibration tool.

1 YEAR WARRANTY

Specifications	QM1670
Range	1 - 14 pH
Resolution	0.1 pH
Accuracy	±0.2 %
Operating Temperature	0°C to 50°C
Weight	120g
Dimensions	40(W) x 158(H) x 34(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Hand Held pH Meter	QM1670	$69.95	$62.95	$55.95
Buffer Solution (50ml)	QM1671	$9.95	$8.95	$7.95

Electronic LPG Gas Level Monitor

The clever unit attaches to your steel LPG bottle. It detects the gas in your bottle, (typically 9kg) and gives a musical alarm when the gas in your bottle is low. Don't run out of gas halfway thru a barbie ever again! Works on any steel LPG cylinder, virtually no installation.

- Uses 2 x AA batteries (supplied)
- Magnetically attaches to cylinder

	Cat.	Qty 1+	Qty 3+	Qty 6+
	QM1662	$15.95	$13.95	$12.45

Electronic LPG Gas Level Monitor

Gas leaks can be incredibly dangerous, even small ones. Run a quick check over your campervan, caravan or gas powered devices to make sure all outlets are safely sealed. Hold the power button for a few seconds and then place the detector near the suspected leak and visual/audible warnings will sound if the leak is bad, moderate or safe. Red (Hi), yellow (Lo), and green (safe) LEDs denote the severity of the leak.

- Measurement ranges: 0-10,000 ppm
- Power on: Press and hold for 3 seconds
- Auto power off: Approximately 3 minutes
- Sensor detects butane, propane, acetylene, and methane (natural gas)

Indications include:

Green: Power on with short beep / safe with no alarm

Yellow: Lo alarm with short beep >2000ppm (0.2%) of methane (natural gas) detected

Red: Hi alarm with long beep >4000ppm (0.4%) of methane (natural gas) detected

	Cat.	Qty 1+	Qty 3+	Qty 6+
	QP2299	$49.95	$44.95	$39.95

Wind Speed Anemometer/Thermometer

Capable of measuring wind/airflow parameters at the same time as monitoring temperature.

- Metres/sec; km/hr; feet/min; miles-per-hour; knots
- Cubic metres/minute; cubic feet/minute
- Air temp, 0°C to 50°C (0.1°C resolution)
- Auto power off
- Vane impeller ball bearing mounted
- 1m vane probe lead

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
Anemometer	QM1646	$139.00	$124.95	$110.95

Handheld Anemometer and Altimeter

Provides wind speed, wind chill, temperature, barometric, and altitude information for any outdoor activity. The main display can be toggled between wind speed or altitude, with the sub-display showing either temperature/wind chill, or barometric pressure and temperature. The feature-packed device is small enough to fit in your pocket and can be used be used hands-free with the included mini tripod.

- Current, max or average wind speed
- Temperature and wind chill
- Relative, max or absolute altitude up to 3000m
- Barometric display-Beaufort wind scale
- LED backlight

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
Anemometer with Altimeter	QM1645	$79.95	$71.95	$63.95

LIGHT METERS & ULTRASONIC CLEANERS

LIGHT METERS

Digital Light Meter

A handy digital light meter for photography, lab work, architectural, engineering and construction applications. It includes an integrated stand and will measure measure incident light in 3 ranges: 0.01 to 200, 200 to 2,000, 2,000 to 20,000 and 20,000 to 50,000 lux.
The photo detector is wired on a curly cord which extends to 1 metre, allowing the user to take light measurements at the optimum position. Sensor cover and carry case included.

- LCD
- 3.5 Digit
- Separate Photo Detector incident light in 4 ranges.

1 YEAR WARRANTY

Specifications	QM1587
Display	2000 count
Range	200, 2000, 20000, 50000 lux/Fc
Accuracy	±5%±10d (<10,000 lux)
	±10%±10d (<10,000 lux)
Resolution	0.1 lux/Fc
Sampling Rate	1.5Hz
Special Features	Data hold, max hold
Battery	1 x A23 (12V)
Dimensions	188(L) x 64(W) x 24.5(D)mm
Photo Detector	115(L) x 60(W) x 27(D)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1587	$59.95	$53.95	$47.95

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Professional Digital Light Meter

Light has an enormous impact on the atmosphere created in a room, office, foyer, retail shop, reception areas, or on film and photography. In some cases, a professionally lit servicescape may be the difference between business success and failure. Achieving the right amount of light is a fine art, and the help of a professional tool should be sought to ensure minimum lighting level standards are achieved. This professional light meter is brimming with features that should be part of every lighting technician's arsenal. It uses photopic spectral sensitivity which closely mimics the response of the human eye to changes in light. It is extremely accurate with a rapid response and can store min and max values for easy comparisons.
Measurement can be switched between LUX and FC (foot candles) and a data hold function is included for pausing the reading. All this is output to an easy to read backlit LCD. A carry plastic case with handle is included for easy and safe transportation.

- Data Hold
- Relative Mode
- Auto Zeroing
- Long-Life Silicon Photo Diode Sensor
- Selectable Lux Or FC Scale
- Auto Power Off: 30 Minutes
- Max and Min Measurements

1 YEAR WARRANTY

Specifications	QM1584
Display	4,000 count with 41 segment bargraph
Max Measurement	400,000 lux / 40.00 kFc
Spectral Response	CIE Photopic
Spectral Accuracy	CIE VA function f1 <=6%
Cosine Response	f2 <=2%
Accuracy	+/-5% +/-10d (<10,000 lux),
	+/-10% +/-10d (>10000 lux)
Accuracy For C.I.E Standard Illuminance	A(2856K)
Sampling Rate	1.5 times/second

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1584	$169.00	$151.95	$134.95

ULTRASONIC CLEANERS

40W Ultrasonic Cleaner

An effective way to clean your jewellery, watch bands, fountain pens, dentures, razor heads, printer heads, coins, eye glases, small silverware, and small machined parts.
Mains powered and easy to use. Fill the 400ml bowl with water, add a mild cleaning solution, then press the power button to start the 3 minute timer. Intended for domestic use only.

- Dimensions: 188(L) x 97(H) x 85(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
400ml	YH5414	$89.95	$80.95	$71.95

Electronic Parts Cleaning Solution

The ready to use solution can be safely used in ultrasonic tanks for various applications including: jewellery, metal parts degreasing, removing flux and cleaning sensitive electronic parts. Appropriate for both static and ultrasonic cleaner use.

- Non-flammable
- Water-based (Biodegradable)

	Cat.	Qty 1+	Qty 4+	Qty 10+
1L	NA1070	$14.95	$13.45	$11.95

80W Ultrasonic Cleaner

Designed to effectively clean your jewellery, watch bands, fountain pens, dentures, razor heads, printer heads, coins, eye glasses, small silverware, and small machined parts. It has a generous size 1.8 litre stainless steel bowl that illuminates blue during operation, and five panel mounted push buttons for easy operation. Features include five timer settings from 90 seconds to 8 minutes, LED display, strong or normal power settings, and a defoam setting that cycles the cleaner for 5 seconds with 3 second intervals. Mains powered.

- Dimensions: 258(L) x 165(H) x 160(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
1.8L	YH5416	$149.00	$133.95	$118.95

For next day delivery, or Click and Collect, see page A4

SOUND LEVEL METERS

Micro Sound Level Meter

1 YEAR WARRANTY

With a range of 40 - 130dB, this little meter is ideal for environmental, safety and sound system testing. It has a fast response time for transient measurements and is A-weighted for the frequency range of human hearing.

- Very compact size
- Min / max hold
- Backlit

Digital for an analogue price!

Specifications	QM1591
Display	4 digit
Range	40 - 130dB (±3.0dB)
Frequency Range	31.5Hz to 8kHz
Weighting	A weighted
Special Features	Pocket sized, min / max hold, back light
Battery	1 x 9V (included
Dimensions	150(L) x 55(W) x 32(D)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1591	$49.95	$44.95	$39.95

Compact Digital Sound Level Meter

1 YEAR WARRANTY

Featuring a wide dynamic range from 30 to 130dB, it can measure both A and C weightings to get the right response for the human ear and can have fast or slow responses to get an "ambient" reading or a short noise. Includes data hold and min/max functions, as well as tripod mount for prolonged use. Great for car audio installers, clubs and PA.

- Supplied with carry case and wind sock.
- Compact size
- Data hold
- Backlit
- Carry case

Specifications	QM1589
Display	4 digit
Range	30-130dB (±1.5dB)
Frequency Range	31.5Hz to 8kHz
Weighting	AC selectable weighting
Response	Fast / slow selectable
Special Features	Max hold, data hold, back light
Battery	1 x 9V
Dimensions	210(L) x 55(W) x 32(D)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1589	$129.00	$115.95	$102.95

Pro Sound Level Meter with Calibrator

1 YEAR WARRANTY

This professional grade sound level meter is designed for all kinds of environmental sound measurement projects. It features a wide dynamic range from 30dB to 130dB, fast (125ms) or slow (1s) time weighting to get an ambient reading or a short noise. minimum, maximum and data hold values, and A & C weightings to get the right response for the human ear. Other features include backlit display with date and time, data logger function, analogue AC/DC outputs for connection to a frequency analyser, and a USB port to connect to your PC for further analysis. Includes an Alarm function which can be set to Over and Under thresholds. Great for car audio installers, clubs and PA. Tripod and mount included.

- MAX & MIN measurements
- Over & Under range display
- A & C Weighting
- FAST (125ms) & SLOW (1s) response
- Data logger
- IEC61672-1CLASS2 Standard
- 32,700 Memories
- 1/2 inch electret condenser microphone
- Analogue Output
- USB Connectivity

Level Ranges:

- Low: 30dB~80dB
- Med: 50dB~100dB
- Hi: 80dB~130dB
- Auto: 30dB~130dB

Analogue Output:

- AC/DC outputs from earphone outlet (AC=1VRMS, DC=10mV/dB)

Includes Calibrator

Specifications	QM1598
Display	4 digit
Accuracy	±1.4dB
Calibration	Included
Dynamic Range	50dB
Resolution	0.1dB
Update	Every 0.5 seconds
Frequency Range	31.5Hz - 8.0kHz
Dimensions	278(L) x 76(W) x 50(D)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
QM1598	$299.00	$269.00	$239.00

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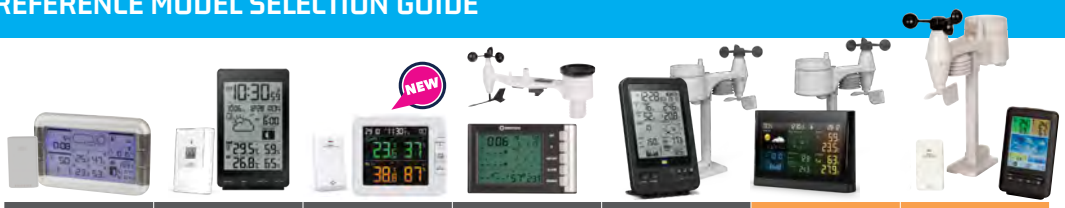

	XC0366	XC0412	XC0438	XC0400	XC0432	XC0434	XC0436
Touch Screen						•	
Indoor Thermometer	•	•	•	•	•	•	•
Outdoor Thermometer	•	•	•	•	•	•	•
Min/Max Records	•	•	•	•	•	•	•
Hygrometer	•	•	•	•	•	•	•
Wind Speed				•	•	•	•
Wind Direction				•	•	•	•
Wind Chill				•	•		•
Dew Point				•	•	•	•
Rain Guage				•	•	•	•
Rain Rate				•	•	•	•
Barometric Pressure	•	•	•	•	•	•	•
Moon Phase	•	•			•	•	•
Time/Date Display	•	•	•	•	•	•	•
High/Low Alarms	•	•	•	•	•	•	•
Transmitter Power	2 x AAA	2 x AA	2 x AA	2 x AA	3 x AA	3 x AA	7 x AA
Colour Screen			•			•	•
Transmission Range	30m	30m	150m	100m	150m	150m	150m
Page	A73	A73	A74	A74	A74	A75	A75
Price	$69.95	$99.00	$129.00	$119.00	$199.00	$299.00	$349.00

Compact Wireless Weather Station/Clock Calendar

This stylish unit features moon phases for the Australian/NZ region. It does not have wind speed/direction but has everything else. It has an external temperature/humidity, barometric sensor, (which really should be on an outside window sill so that you can easily access it for battery change). It has fantastic time logging. All-in-all, excellent value for money.

- Clock, clock alarm/snooze
- Calendar, including Day announcement
- Barometer trend log
- Weather forecast icons: Sunny, Partly Cloudy, Cloudy, Rainy, etc.
- Moon phase display (with tide indication)
- Sunrise/sunset time display
- Temperature/humidity display
- Temperature alert alarm

Specifications	XC0366
Transmitter Frequency	433MHz
Power	2 x AA & 2 x AAA (not included)
Dimensions	Console: 220(W) x 141(H) x 36(D)mm
	Transmitter: 100(W) x 55(H) x 22(D)mm

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
Compact Wireless Weather Station	XC0366	$69.95	$62.95	$55.95

Indoor/Outdoor Weather Station with Modern Upright Display

This is a stylish unit ideal for a desk top. It features an outdoor remote transmitter that displays temperature and humidity itself, which is handy when you are outdoors and need to know these things. The transmitter requires 2 x AA batteries (which last for ages - use good ones though!). It has a hook hanger but will sit up on a flat surface. Range 30-50m. The console unit has a high contrast 125(diagonal) x 70(W)mm monochromatic display with a pleasant amber backlight. It also has an alarm with snooze function.

- Large time display
- Date/Day alarm time
- Moon phase
- Indoor/Outdoor Temperature/Humidity
- Limited weather forecast

ADDITIONAL TEMP/HUMIDITY SENSOR

XC0413

Supports up to 3 sensors allowing you to monitor 3 different environments such as kids room, kitchen or living room at once.

Note: Unit requires 2 x AA batteries to operate

Specifications	XC0412
Frequency	433MHz
Wireless Transmission Range	30m
Power - Main unit	2 x AA (not included)
Power - Remote sensor	2 x AA (not included)
LCD Dimensions	70 x 105mm
Dimensions - Remote sensor	100(H) x 65(W) x 35(D)mm
Dimensions - Main unit	85(W) x 142(H) x 55(D)mm

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
Indoor/Outdoor Weather Station	XC0412	$99.00	$88.95	$78.95
Additional Temp / Humidity Sensor	XC0413	$39.95	$35.95	$31.95

All prices are in Australian Dollars

For next day delivery, or Click and Collect, see page A4

Smart Wi-Fi Multi-Channel Weather Station with Colour LCD Screen

NEW

With this feature-rich Wi-Fi weather station, you can use your Smartphone to check the temp and humidity in your home or office in real-time, or download and graph the history data by day, month or year. You can even set up alerts to your phone when high or low conditions are met. When your wine cellar gets too hot, for example. The wireless high precision temp/humidity sensor can be mounted up to 150m away, and up to 6 more can be added (sold separately), which can cycle through automatically on the screen. The display can be desk or wall mounted, features large easy-to-read colour digits, and has two brightness settings for day or night. Other features include synchronised Internet local time and date, alarm with snooze, weather trend, comfort level indicator, min/max temp & humidity readings, and the ability to trigger other Tuya compatible IoT devices. Works with Tuya smart & Smart life Apps, and supplied with a mains power adaptor.

Soil Thermo-Moisture Sensor available separately: XC0439

- Long range 150m wireless Thermo-Hygro sensor
- Access from you Smartphone via Wi-Fi
- Supports up to 7 sensors

Works with Tuya smart & Smart life Apps

Powered by tuya Intelligence Inside

1 YEAR LIMITED WARRANTY

Specifications	XC0438
Frequency	868MHz
Wireless Transmission Range	150m
Power - Main unit	CR2032 (not included)
Power - Hygro-Thermo Sensor	2 X AA (not included)
Dimensions	Main unit: 130(W) x 112(H) x 27.5(D)mm Remote Sensor: 113(H) x 61(W) x 39.5(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
	XC0438	$129.00	$115.95	$102.95

Wireless Thermo-Moisture Soil Sensor

NEW

The XC0439 is a addon sensor for the Smart Weather Station XC0438 it allows you to take remote outdoor soil moisture readings while staying in the comfort of your home. Connected via the Tuya platform, installation is fast and simple.

The design of the unit allows it sit higher above the soil, allowing for improved data transmission ranges while giving you soil readings when you need it. Get set for the dry months with an XC0438 weather station with 8 day forecasting and a range of soil moisture sensors to manage your watering days and keep you garden in tip-top shape.

- Measures soil temperature and moisture
- Transmission status LED
- Up to 150m range

Powered by tuya Intelligence Inside

1 YEAR LIMITED WARRANTY

Specifications	XC0439
Dimensions	113(H) x 61(W) x 40(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
	XC0439	$34.95	$30.95	$27.95

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Wireless Weather Station with 5.5" Mini LCD

This unit records temperature, wind chill, wind speed/direction, dew point, humidity and more. It also features alarm modes for temperature, humidity, wind chill and more. Data will be transmitted wirelessly to the display unit over distances up to 100m. It features an LED backlight for greater reading clarity in poor light.

- Records mix/max temperature
- Wind direction
- 12 or 24 hour time display
- Time alarm

1 YEAR WARRANTY

Specifications	XC0400
Temperature Range (Outdoor)	-40°C to 65°C (-40°F to 149°F)
Temperature Range (Indoor)	-9.9°C to 60°C (-14°F to 140°F)
Windchill	-40°C to 65°C (-40°F to 149°F)
Weather Alarm Mode	Temp, humidity, wind chill, dew point, rainfall, wind speed
Wind Speed	km/h, mph, m/s, knots, Beaufort
Power	Outdoor Sensor: Requires 2 x AA 1.5V LR6 Alkaline batteries. Base Station: 3 x AA 1.5V LR6 Alkaline batteries Power supply included for base station.
Dimensions (Base Station)	142(H) x 90(L) x 30(W)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Wireless with 5.5" Display	XC0400	$119.00	$106.95	$94.95

Modern, Upright Style with Clear LCD Screen and Longrange Data Sender

Apart from the very clear (monochrome) upright LCD screen, this unit includes the same 5-in-1 weather sensor/transmitter as the XC0434 unit shown elsewhere. Older transmitters operate on the 433MHz ISM band, which is plagued by garage door opener transmitters. This unit works on the 917MHz band with a range of up to 150m and is not allocated to a lot of consumer-type equipment. This unit has basically the same features of the XC0434 (See that unit for details) but with a compact display and offers a saving over the colour console unit.

150m transmission range

1 YEAR WARRANTY

Specifications	XC0432
Frequency	917MHz
Wireless Transmission Range	150m
Power - Main unit	3 x AA (not included)
Power - Remote sensor	3 x AA (not included)
LCD Dimensions	90 x 120mm
Dimensions - Remote sensor	343(W) x 393(H) x 136(D)mm
Dimensions - Main unit	120(W) x 190(H) x 22(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
	XC0432	$199.00	$178.95	$158.95

WEATHER STATIONS CONTINUED

7" Colour Touchscreen with 5-Way Longrange 917MHz Transmitter

The main improvement to this model over the previous unit is the outdoor weather sensor. This sensor does not use the 433MHz band, which is sometimes plagued by interference from garage door openers especially. This model will send weather data to the indoor console unit up to 150m away! It has an improved rain gauge as well.

THE SENSOR

- Temperature / humidity
- Wind speed
- Wind direction (16 point)
- Rain gauge

Requires 3 x AA batteries

Large 7" Colour Display

THE CONSOLE DISPLAY

- Active display area measures 165 x 90mm
- Time, calendar, weekday and alarm
- Gust, or average wind speed (m/s, kmh)
- Real time and dominant wind direction
- Rain rate, daily/weekly/monthly (in or mm)
- Weather forecast (Sunny, slightly cloudy, cloudy, raining, stormy or snowy)
- Barometric pressure (relative or absolute)
- Histogram of rainfall or barometric data
- Much, much more

1 YEAR WARRANTY

Specifications	XC0434
Frequency	917MHz
Wireless Transmission Range	150m
Power - Main unit	5V Mains adaptor included
Power - Remote sensor	3 x AA
LCD Dimensions	165 x 90mm
Dimensions - Remote sensor	343(W) x 393(H) x 136(D)mm
Dimensions - Main unit	202(W) x 138(H) x 38(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Weather Station and Sensor	XC0434	$299.00	$269.00	$239.00

Wireless Digital Weather Station with Colourful LCD Display and Wi-Fi

Wi-Fi

Get your own local weather forecast with this professional Wi-Fi weather station. The feature-rich system is supplied with a wireless 5-in-1 outdoor sensor to measure rainfall, wind speed, wind direction, temperature, and humidity, as well as one high-precision hygro-thermo sensor to measure humidity and temperature from another place on your property. All sensors send data by a low power radio frequency signal (917MHz band) to the multi-colour main display unit up to 150m away (line of sight).

The backlit display can be desk or wall-mounted, and shows you the local forecast, high/lows, totals and averages for virtually all weather variables, without a PC. Connect it to your Wi-Fi network to be able to upload the weather data to wunderground.com and weathercloud.net, where you can access and upload your weather data freely. The time and date will be kept accurate as well, thanks to the internet time server.

With calibration and moon phase features, this system is truly a remarkably personal yet professional weather station for your own backyard.

Supplied with a USB power cable to power the main display from an available USB power source.

ADDITIONAL TEMP/HUMIDITY SENSOR XC0437 **NEW**

Connects to Wi-Fi network to upload data onlne

1 YEAR WARRANTY

Specifications	XC0436
Frequency	917MHz
Wireless Transmission Range	150m
Power - Main unit	CR2032 (included)
Power - Remote sensor	3 X AA (not included)
Power - Hygro-Thermo Sensor	2 X AA (not included)
LCD Dimensions	87 x 106mm (5.4" Diagonal)
Dimensions - Remote sensor	61(W) x 115(H) x 38(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Weather Station and Sensors	XC0436	$349.00	$309.00	$279.00
Additional Temp/Humidity Sensor	XC0437	$39.95	$35.95	$31.95

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ENVIRONMENT MONITORS

Digital Rain Gauge with Temperature

This Digital Rain Gauge with Temperature has a wireless self-emptying rain collector for measuring rain fall and temperature. The wireless rain collector sensor transmits data by using a low power radio frequency to the display main unit that can be located up to 150m away (line of sight). The display unit stores the data over a time range to allow you to monitor and analyse the weather status for past 24 hours. It has advance features such as the HI/LO Alert alarm to alert you while the set high or low weather criteria are met. It allows you to analyse hourly, daily, weekly, monthly and yearly rain fall records. With radio-controlled / atomic clock feature built-in, the system is truly a remarkable personal but professional rain gauge for your own backyard.

- Total Hourly, Daily, Weekly, Monthly and Yearly rainfall display
- Data logger stores and gathered data to display rainfall
- Graphical histogram display shows variation of rainfall pattern
- SINCE function to display TOTAL rainfall from a date
- Real time clock display with Atomic Radio Controlled function
- 150m sensor transmission range
- High / Low Alert function
- Alarm function with ice-alert function
- Large backlit LCD
- Measures temperature

150m range

1 YEAR WARRANTY

Specifications	XC0430
Battery	2 x AA size 1.5V batteries (not included)
Support Channels	Wireless sensor (Rain gauge, thermo sensor)
Dimensions	155(H) x 95(W) x 23(D)mm
Weight	372g

	Cat.	Qty 1+	Qty 3+	Qty 6+
Rain Gauge	XC0430	$99.95	$89.95	$79.95

USB Temperature & Humidity Data Logger

An easy to use temperature and humidity data logger with USB interface. The logger is water resistant so it can be used indoors or outdoors. Big buttons with LCD display to easily change your settings. Stores up to 20,736 readings, and there is capacity gauge to monitor memory usage. Once connected to a computer via USB, the supplied software can read the logged data and export in graphs or CSV files.

- 20,736 readings capacity
- Logging interval from 8 seconds to 4hrs

1 YEAR WARRANTY

Upload logged data via USB

Specifications	XC0424
Temperature Range	-40˚C to 60˚C
Humidity Range	0%RH - 99%RH
Power	1 x 3V CR2032
Battery Life	12 months
Dimensions	87(L) x 60(W) x 19(H)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
	XC0424	$49.95	$44.90	$39.90

Find Out More In Store

Our staff offer friendly and helpful service. We're here to help.

Ultrasonic Water Tank Level Meter with Thermo Sensor

Keep an eye on your outdoor water tank from the comfort of your own living room, up to 100m away. Installed at the top of your water tank, the transmitter unit measures the water level and temperature using an ultrasonic sensor. You can hang the receiver unit on a wall (hooks) or pull out the stand and place it on your kitchen bench top, table or desk. View your room's temperature, tank temperature and water level (represented by a 10 element bar graph). You can store min/max records and set alarms for specific water levels (high/low) or when empty.

- Transmission range up to 100m
- Time display (12/24hr) / Time alarm mode
- Indoor temp. display / Tank temp display
- Tank level display (metre/feet)
- Tank level updated every 30 seconds or 3 mins
- Water level displayed on a 10 element bar graph
- Min. & Max. records for indoor & tank temp
- Tank level alarm mode (high/low)
- Tank empty alert
- Low battery indicator
- Wall mount, Free standing
- Calendar display

Min / max records and alarms

1 YEAR WARRANTY

Specifications	XC0331
Battery Power	Receiver: 2 x AA 1.5V (not included) Outdoor transmitter: 6 x AAA 1.5V (not included)
Dimensions	Receiver: 106(L) x 97(W) x 24(D)mm Sensor (into tank): approx 47(Dia.)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Water Tank Level Meter	XC0331	$99.95	$89.95	$79.95

IRRIGATION TIMER

Digital Irrigation Timer with 3 Individual Timers & Water Sensor

NEW

This unit is itself waterproof (IPx5), runs for ages on 2 x AA alkaline batteries, simply connects to any 3/4" garden tap. It is supplied with 1/2"; snap in hose adaptor as well. It has a clear LCD display and comes with a clear instruction book. It is ideal for gardens, shrubs, small lawns, patios etc. It probably is not big enough for large lawn/garden setups. A great feature is a prominently mounted rain sensor which shuts the unit off to save unnecessary watering if its raining. When it stops raining it resumes normal programming.

Three individual timers

Specifications	AA0380
Batteries	2 x AA Alkaline (Not included)
Working Pressure	0.05 to 0.8 MPA
Hose Tap Connection	1/2" or 3/4"
Ingress Protection	IPX5
Dimensions	160(L) x 86(W) x 56(H)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Irrigation Timer & Water Sensor	AA0380	$59.95	$53.95	$47.95

AUTOMOTIVE TEST EQUIPMENT

Low Voltage Circuit Tester 6, 12, 24 Volts

Looks like a neon test screwdriver but instead of a blade on the end this tester has a probe and a 28" lead which clips to ground. Suitable for 6/12/24 volts for use on cars, trucks, boats, etc.

	Cat.	Qty 1+	Qty 3+	Qty 6+
6-24VDC	TD2049	$5.95	$5.35	$4.75

In-car Battery Monitor and Temperature Display

Absolute plug and play - simply plug it into an available cigarette lighter socket and you're good to go! Whenever power is applied, it will provide you with battery / system voltage, and current temperature.

- Dual function display
- No installation required
- Bright LED screen
- Temperature Meter: 10°C to 80°C +/- 0.1°C
- LED: Blue+Red

	Cat.	Qty 1+	Qty 4+	Qty 10+
5-30VDC, -10°C to 80°C	QP2222	$19.95	$17.95	$15.95

Self Powered Round LED Voltmeter 5-30VDC

1 YEAR WARRANTY

Quite possibly the easiest way to monitor your battery voltage, or the voltage in any DC powered system. Simply wire up to a positive and negative DC power source of 5-30VDC, and the voltmeter tells you the voltage (taking power from the DC source to operate). Supplied with a panel mount and a surface mount "hood". Connection is via 6.3mm spade terminals.

- Voltmeter: 36(Dia) x 26(D)mm
- Panel mount: 60(W) x 42(H)mm
- Surface mount hood: 55(W) x 80(L) x 50(H)mm

	Cat.	Qty 1+	Qty 5+	Qty 10+
LED Voltmeter	QP5582	$24.95	$22.45	$19.95

Dual Battery LED Voltmeter

Monitors two power sources at once - ideal for dual battery installations. Includes flush panel-mount and surface-mount hardware. Voltage range is 10-60VDC, so it's suitable for some higher voltage (eg, 48V) solar installations too, to potentially monitor PV and battery voltage simultaneously.

- Operating Voltage: 10-60VDC
- Dimensions: 49(D) x 35(Dia.)mm

	Cat.	Qty 1+	Qty 5+	Qty 10+
10-60VDC	QP5583	$29.95	$26.95	$23.95

Blue LED Display Thermometer with 3m External Sensor

NEW

A quick and simple way to monitor temperature in a vehicle, this panel mount guage displays the temperature being picked up by the probe thats mounted to a handy 3m cable so it can be run behind a dash into the engine bay. Simply wire up to a DC power source between 12-24VDC, and the blue LED display will show current temperature.

- Supplied with brackets for panel mounting
- Connection is via 6.3mm spade terminals

Specifications	QM7313
Temperature	-14°C to 120°C
IP Rating	IP66
Dimensions	60(W) x 42(H)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
-14°C to 120°C	QM7313	$19.95	$17.95	$15.95

12V Car Voltage, Alternator & Temperature Display

1 YEAR WARRANTY

Plugs into the car's cigarette lighter socket to display the car's battery voltage and inside temperature. An audible and visual alarm can be set to trigger when the car's battery voltage dips too low, which could save you from breaking down in the middle of nowhere with a dead car battery. The display features a tricoloured LED to show the battery status and electrical system status at a glance. Stylish modern design allows for easy dash mounting. Celsius or Fahrenheit temperature display.

	Cat.	Qty 1+
12VDC	XC0117	$34.95

Panel/Surface Mount LED Voltmeter & Amp Meter

Quite possibly the easiest way to monitor battery voltage and current draw on your van, RV or boat. Simply follow the included wiring diagram to measure 5-30VDC, and 0 to 10A DC. Supplied with a panel mount and a surface mount "hood". Connection is via three 6.3mm spade terminals (current shunt built-in).

- Volt/Current Meter: 36(Dia) x 40(D)mm
- Panel Mount: 60(W) x 42(H)mm
- Surface mount hood: 55(W) x 80(L) x 50(H)mm

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 5+	Qty 10+
5-30VDC, 0-10A	QP5584	$39.95	$35.90	$31.90

LED Voltmeter 5-15VDC with Bar Graph

A quick and simple way to monitor the battery voltage in a vehicle, this voltmeter simultaneously shows the voltage numerically and on a bar graph. Simply wire up to a DC power source between 5-15VDC, and the blue LED voltmeter displays the voltage. Supplied with a panel mount and a surface mount "hood". Connection is via 6.3mm spade terminals.

- Voltmeter: 36(Dia) x 26(D)mm
- Panel mount: 60(W) x 42(H)mm
- Surface mount hood: 55(W) x 80(L) x 50(H)mm

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 5+	Qty 10+
5-15VDC	QP5589	$39.95	$35.95	$31.95

Bluetooth® Battery Monitor

A powerful intelligent battery monitor for smartphones. It's easy to install, simple connect to the battery terminals - that's it! Then install the free to download app on your favourite smartphone, for full real-time display, datalogging, as well as push notifications for low battery voltage warnings and more! Short circuit and reverse polarity protected for safety. Easy to use and convenient.

- Real-time battery monitoring
- Stores & displays historical data
- Tests: battery, cranking, charging, trip duration
- Automatic sync, alerts sent to mobile (free APP on iOS, Android)

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 4+	Qty 10+
Battery Monitor	QP2265	$49.95	$44.95	$39.95

AUTOMOTIVE TEST EQUIPMENT CONTINUED

Battery, Charger & Alternator Testers

These handy devices quickly indicate the condition of your car or truck battery, charger or alternator. They use 3 LEDs to indicate battery and charge under engine on/engine off conditions. Compact and lightweight, they include 600mm leads with crocodile clips, and an inbuilt magnet to secure the unit while taking measurements.

- Dimensions: 120(L) x 33(W) x 20(D)mm

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
3-in-1 Tester	QP2258	$12.95	$11.35	$10.35

Specialist Universal LCD Battery Tester

Provides testing for most types of small rechargeable batteries, including a huge range of Lithium-based (LiFePo4, Li-Ion etc) batteries. You can test voltage, capacity, and internal resistance. Internal resistance is usually tied to the current charge level, however generally increases with a battery's age, it provides a good indication of battery health, most notably in Lithium-based rechargeable batteries. It also works with alkaline and various other non-rechargeable batteries.

- Tests over 11 types of batteries including cylindrical and button cells
- Test battery voltage, capacity (%), and internal resistance
- Weight: 161g (Includig Cables)
- Cable Length: 720mm
- Dimensions: 75(W) x 135(H) x 28(D)mm

See website for full specifications.

	Cat.	Qty 1+	Qty 4+	Qty 10+
Battery Tester	QP2260	$39.95	$35.95	$31.95

Digital Tachometer with Memory

This non-contact digital tachometer provides fast and accurate RPM and surface speed measurements of rotating objects. It has a wide measurement range from 2 to 99,999 RPM with high resolution on the 5-digit backlit LCD screen. The easy to use device also features an integrated laser pointer, RPM and Revolution test modes, a sampling time of 0.5 seconds (over 120 RPM), and built-in memory recalls for maximum, minimum, and last values stored. Carry case included.

- RPM & revolution modes
- Min & Max values
- High resolution
- 2 - 99,999 RPM

Specifications	QM1449
Accuracy	± (0.05%+1 digits)
RPM Test Range	2 to 99,999 RPM
Count Range	1 to 99,999 REV
Resolution	0.1 RPM (2 to 999.9 RPM), 1 RPM (Over 1000RPM)
Sampling Time	0.5 Sec. (over 120 RPM)
Detecting Distance	50mm to 500mm
Dimensions	160(L) x 58(W) x 39(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Tachometer with Memory	QM1449	$69.95	$62.95	$55.95

Automotive Multi-Function Circuit Tester with LCD

Designed to test the electrical system of an automotive vehicle running on 12V or 24V. One of the great features is being able to activate components with positive or negative without using a jumper wire. To top it all off the easy to read LCD is backlit so it's perfect for the dark crevices of an engine bay. All the features of a brand name unit at a fraction of the price. For full specifications see our website.

- Dimensions: 240(L) x 78(H) x 40(W)mm

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
Works on 12V or 24V systems	QM1494	$64.95	$58.45	$51.95

OBD-II Engine Code Reader

Modern car engines are controlled by computers which regulate engine performance. Sensors are connected to major components which constantly send data to the computer which then adjusts performance accordingly to ensure minimal emissions and optimal performance. Reading data from these computers helps mechanics pinpoint where problems may lie in car performance. You can also find out this information with this OBD-II engine code reader. It connects to your OBD-II port and will immediately intepret the information in the ECU (engine control unit). You can use this information to find faulty sensors which adversely affect performance, see if cylinders are misfiring, see how hot your engine coolant is, view engine RPMs and much more. Diagnosing and fixing certain problems yourself can save a lot of time and money. It's also fascinating to see how much engine information is readily available in modern cars.

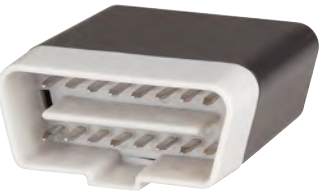
1 YEAR WARRANTY

Viewable parameters*:

- Vehicle Speed
- RPM
- Fuel Consumption
- Engine Coolant Temp
- Fuel Pressure

** Not all measurements will be available in some cars*

Bluetooth®



	Cat.	Qty 1+	Qty 2+	Qty 4+
OBD-II Engine Reader	PP2145	$69.95	$62.95	$55.95

ODB-II Engine Code Reader/Diagnostic Tool with 2.4" LCD

NEW

A great way to accurately identify car problems and avoid unnecessary or costly maintenance. This handy diagnostic tool plugs into the OBD-II port of your car and displays the data from the engine system directly on the backlit 2.4" colour LCD screen. See engine performance real-time, quickly read and clear engine data trouble codes (DTC), turn off MIL light, perform an electrics cranking or charging test, check state emission monitor status, drive cycle verification, and much more. Works with most OBD-II compliant cars, mini vans, and light duty vehicles sold worldwide since 1996.

- Read & remove codes
- Reads live PCM data stream
- Views freeze frame data
- Easily determines the cause of the Malfunction Indicator Light (MIL)
- Turns off Malfunction Indicator Light (MIL), clears codes and resets monitors
- Displays DTC (Data Trouble Codes) definitions
- Retrieves generic (P0, P2, P3, and U0), manufacturer specific (P1, P3, and U1) codes, and pending codes
- Displays monitor and I/M readiness status (emissions)
- Retrieves vehicle information (VIN, CIN and CVN)
- Test the vehicle charging and cranking systems

Screen shown for illustrative purposes only.

Specifications	PP2147
Operating Voltage	8-18VDC
Display	2.4" Colour LCD, 220 x 176dpi
Dimensions	130(L) x 85(W) x 25(D)mm

	Cat.	Qty 1+	Qty 2+	Qty 4+
OBD-II Engine Reader with 2.4" LCD	PP2147	$59.95	$53.95	$47.95

OBD-II Extension Cable

OBD-II male to female extension cable. Can be used to re-locate the OBD-II port for easier accessibility.

NEW

	Cat.	Qty 1+	Qty 2+	Qty 4+
1m long	LA9037	$19.95	$17.95	$15.95

TYRE AIR PRESSURE

Compact Tyre Pressure Gauge

Tyre wear is exaggerated when your tyre pressure isn't kept at the manufacturers recommendations. Now you can check your tyre pressure before you set off with confidence. Simply push onto the valve, press the button, and presto! Your pressure is displayed on the screen. It couldn't be easier!

- Air Pressure Units: psi, bar, kPa, kgf/cm²
- Battery: 1 x LR44 Button Cell (Included)
- Dimensions: 42(W) x 98(H) x 26(D)mm, 48g

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
5 - 100psi	QP2285	$11.95	$10.45	$9.45

Tyre Pressure Gauge with Deflation Monitoring

Keeping your tyre pressure in check is important for maximising the life of your expensive tyres. But if you're travelling on sand or muddy terrain, or 4WDing in general, you often want to reduce pressure in the tyres to maximise your overall footprint and stability. Sure, you can grab a stick and manually deflate the tyres, but who wants to do that! Use this gauge and it will show current pressure while it deflates, so you can stop at any time! Also helps prevent over-deflation of tyres! Also features a bright LCD and LED torch to help you see what you're doing.

- Measurement Range: 5-100psi
- Units of Measurement: psi, bar, kg/cm²
- Batteries: 2 x CR2032 Button Batteries (Included)
- Dimensions: 33(W) x 150((H) x 36(D)mm, 81g

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
5 - 100psi	QP2287	$29.95	$26.95	$23.95

CIRCUIT TESTER

Non-Contact AC Voltage Proximity Detector

About the size of a marking pen, this non-contact tester detects AC voltages from 200-1000V. Featuring red and green indicators, the unit will glow green when safe, and when voltage is detected it will flash red and beep at an increasing rate as you get closer to the voltage source.
It can be used for detecting live mains in outlets, power boards or insulated wiring. It also has an LED torch and a handy pocket clip.
A must for every toolbox!

- Auto Power Off
- Flashlight function
- CAT III rated
- Green and Red LED indiciators
- Switchable audible and silent mode
- Includes 2 x AAA batteries
- Dimensions: 176(L) x 26(D)mm

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
	QP2268	$24.95	$22.45	$19.95

3-30VDC Tester with Voltage/Polarity Readout

Provides useful debugging and testing in many systems, most notably vehicles, boats, motorbikes, and other 6-24V systems. It provides an accurate voltage readout as well as polarity check. It's a more advanced version of a test-lamp used for decades in the automotive industry. Self powered from the test circuit.

- Tests powered-on circuits
- Works on 6V, 12V, and 24V systems
- Stainless steel testing probe

Specifications	QP2216
Working Voltage Range	3V-30V (±0.3V Accuracy)
Operating Current	12VDC < 70mA
Dimensions	228(H) x 30(Dia.)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
	QP2216	$19.95	$17.95	$15.95

SPECIALTY METERS

30m Laser Distance Meter with 5m Tape Measure

Use this 2-in-1 laser measuring tape to measure rooms or areas up to 30m* using the laser or objects up to 5m using the retractable tape. The display can be set to show metres, inches or feet, with a laser accuracy down to just +/-3mm in ideal lighting conditions. The internal rechargeable battery can be charged from an available USB power source, and power save features extend the battery life.

**Up to 30 metres under good measuring conditions (good measuring surface, room temperature). Under bad measuring conditions (such as too strong ambient light, excessive or small measured coefficient of the measured point, excessive temperature difference, etc.) the deviation is ±0.25mm/m.*

Please use a reflector in cases of strong sunlight or poor reflection of the target

Specifications	QM1627
Units	m/in/ft
Distance Range	0.03m - 30m
Measurement Accuracy	+/- 3mm
Measurement Time	0.3-4s
Battery	500mAh 3.7V Lithium
Automatic Power off	After 45 seconds
Laser	620~670nm, <1mw, 15 second power off
Dimensions	75(L) x 75(H) x 40(W)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
	QM1627	$59.95	$53.95	$47.95

Mini Laser Distance Meter - 20m

A laser distance meter makes light work of taking area measurements. No longer do you have to get a second pair of hands on the other end of a tape measure, while you find some eye-protection for the inevitable recoil when you're done! Providing measurements up to 20m, with an accuracy of just 1.5mm - that's probably less than the flex in the end-hook of a tape measure anyway! Resolution down to 1mm, it also provides the last 20 measurements. Works in metric or imperial measurements, and can even help you with your area and volume calculations! The weatherproof case helps you work in just about all conditions too.

- Up to 20m range
- Metric and imperial
- Area volume calculations
- Weatherproof IP54 case

Specifications	QM1626
Batteries	2 x AAA (included)
Range	0.05 to 20m
Accuracy	1.5mm
Resolution	1mm
History	20 Measurements
Units	m, in, ft
Laser Class	Class II 650nm, <1mW
IP Rating	IP54
Operating Temperature	-10°C to 50°C
Battery Life	Up to 5000 Measurements
Weight	64g (excluding batteries)
Dimensions	37(W) x 100(H) x 24(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 4+
	QM1626	$69.95	$62.95	$55.95

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STUD DETECTOR

3 in 1 Stud Detector with Laser Level

A stud detector that doesn't just "beep" when you're over the stud, it shows the proximity when you are NEAR a stud via the large LCD and shows a target graphic when you're spot on. Also includes live wire (voltage) detection, you can be sure that nail you're about to hammer into the wall won't end up in your mains wiring. The best feature of all is the built in laser level. Rotating across 180° with stops on 45° and 90°, you can instantly and easily do layouts and basic tasks such as picture levelling in a snap. The inbuilt spirit level ensures you're at the right angle.

- Laser levelling, layout and stud locating on vertical and horizontal surfaces
- Wood, metal and live wire detection
- 180° pivoting laser plane with level and plumb vials
- 20ft laser line projections onto work surface with 90° squaring
- Two self contained half pins to mount unit to work surface
- LCD sensing and mode display with target graphics
- LED display with continuous live wire detection
- Thumb dial adjustable feet for levelling the laser
- Easy keypad operations and comfortable grip
- Powered by 9V Battery (included)
- Dimensions: 180(H) x 67(W) x 38(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Stud Detector	QP2288	$59.95	$53.95	$47.95

VERNIER CALIPERS

Budget 150mm Digital Vernier Calipers

This carbon composite digital caliper is ideal for general use and situations where the cost of our precision stainless steel tool isn't justified. The digital display is calibrated in imperial and metric units with a corresponding vernier scale etched onto the caliper slide. While we wouldn't recommend you use this caliper to build the Space Shuttle, it's perfectly suited to the home handyperson who finds traditional calipers hard to read.

- 150mm measurement range
- 0.1mm resolution
- 8.3mm LCD character height
- 245mm Overall length (closed)
- Internal and external jaws
- Includes battery

	Cat.	Qty 1+	Qty 3+	Qty 6+
Budget 150mm Vernier Calipers	TD2081	$17.95	$15.95	$13.95

150mm Digital Vernier Calipers

This precision instrument is made out of surgical grade stainless steel. It features a 5 digit LCD and will show readings in metric - 3 significant figures plus 2 decimal and in imperial - 2 significant figures and would you believe 3.5 decimal. (The fourth figure is either 0 or 5). The caliper can be zeroed at any point on the scale. Supplied with a sturdy clip-lock case with foam retainer and provision for spare battery.

- 0 - 150mm (0-6") range
- Resolution 0.01mm / 0.0005" (repeatability same)
- LR-44 battery powered (supplied)
- Battery life 12 months nominal
- Auto power off
- Thumbscrew slide damper
- Converts millimeters to inches and vice versa

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 3+	Qty 6+
150mm Vernier Calipers	TD2082	$39.95	$35.90	$31.90

WEIGHING SCALES

100g Mini-Pocket Scale

Truly pocket-size scales. Ideal for laboratory, diets, clinical, jewellery or lapidary work. They'll measure up to 100 grams with excellent resolution and weigh in grams, carats, pennyweight or ounces. 1 x CR2032 battery included.

- 60 second auto power-off
- Tare function
- 0.01g resolution
- Dimensions: 72(L) x 40(W) x 10(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
100g Mini-Pocket Scale	QM7258	$49.95	$44.90	$39.90

200g Mini-Scale with Backlight

Extremely accurate mini scale suitable for a variety of applications. The large LCD is backlit and a 200g calibration weight is included. Resolution is 0.01g and it weighs in grams, carats, and pennyweight.

- 2 x AAA batteries included
- Dimensions: 93(L) x 52(W) x 20(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
200g Mini-Scale with Backlight	QM7259	$69.95	$62.95	$55.95

1kg Digital Bench Scale

Precision 1kg electronic scale with resolution of 0.01g for when a high degree of accuracy is required. Weighs in grams, ounces, pounds, grains, carats, troy ounces and also supplied with a wind shield and a built-in bubble level to provide maximum accuracy. Particularly suited to calculating quantities as it counts pieces by weight. Powered by 4 x AA batteries (not included) or mains adaptor. Suitable for kitchen, lapidary, jewellery, reloading etc.

- 1min auto power-off
- Automatic calibration
- Backlit LCD
- Tare function
- Counting function
- Mains powered
- Dimensions: 175(W) x 75(H) x 260(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
1kg Digital Bench Scale	QM7264	$199.00	$178.95	$158.95

Compact Digital Luggage Scale 50kg

Provides measurement in grams and kilograms, as well as pounds and ounces.
Bright display with clear numbers and blue-backlight.
Battery included.

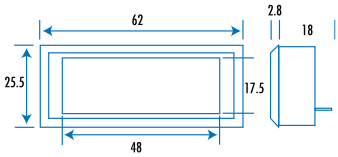
- Up to 50kg
- kg/g and lb/oz
- Blue backlight

	Cat.	Qty 1+	Qty 3+	Qty 6+
50kg Luggage Scale	QM7234	$19.95	$17.95	$15.95

PANEL METERS

3.5 Digit LCD Panel Meter

- Attractive modern bezel
- Snap retaining into panel
- Shallow depth
- 0.1" launcher connections
- Polariy: Automatic (-) for negative value
- Input: Analogue
- Zeroing: Automatic
- Operating temp: Standard 0°C to 50°C
- Configuration: True differential input & reference
- Decimal point: User selectable
- Full scale range: 200mV
- Impedence: 10MΩ
- Conversion rate: 2.5 per second



Specifications	QP5570
Type Of Display	LCD
Digits	3 1/2 digits (1999) 12.7mm figure height
Power	5V powered
Over Range	Display flashes "1"
Accuracy	±(0.1%rdg.+1dgt.)
Connection	13 pins
Dimensions	62(W) x 25(H) x 15(D)mm
Panel Cutout	60.5(W) x 24(H)mm

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 5+	Qty 10+
LCD Panel Meter	QP5570	$27.95	$24.95	$22.35

Add On Board to suit QP5570

This add on board makes it easy to set the range and decimal point on our QP5570 panel meter. The ranges can be permanently set with a solder bridge or wired to a switch for selectable ranges.

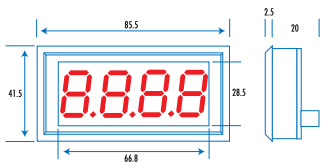
Note:

- *Also suits previously sold QP5580 LED panel meter, but doesn't support 200mV range*
- *Cannot be used in applications where voltage to be measured also powers DPM*

	Cat.	Qty 1+	Qty 5+	Qty 10+
Add On Board to suit QP5570	QP5575	$9.95	$8.75	$7.75

3.5 Digit Jumbo LED Panel Meter

This is not just a digital display, but a fully functional high impedance digital panel meter that only requires power to operate. It will measure voltages from 200mV to 500VDC (jumper selectable) and has a maximum count of 1999. The module is suitable for a host of applications and can be used as a voltmeter or adapted for use as a current meter, thermometer etc. The decimal point location can be selected with a jumper and the module uses an easy "plug-in" fixing method. The meter shares a common ground with the voltage being measured.



Specifications	QP5585
Type Of Display	LED
Digits	3.5 Digits (1999) 20.3mm figure height
Power	5VDC, common ground, 60mA typical
Over Range	"1" shown on display
Accuracy	±0.5%
Dimensions	85(W) x 42(H) x 25(D)mm
Panel Cutout Size	84(W) x 41(H)mm

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 5+	Qty 10+
3.5 Digit Jumbo LED Panel Meter	QP5585	$34.95	$31.45	$27.90

Self-Powered LED Panel Meter 4.5-30VDC

Super simple to install, simply connect the power you want to monitor! Some panel meters require a power source in addition to a sensor wire to the source you want to monitor. The unit connects straight up, with no fuss! Suitable for use between 4.5V and 30VDC, it's suitable for many DC applications including cars, boats, caravans, and other 12-24V sources. However its wide measurement range means it can be applied to many other applications too! Red coloured display. Panel mount with self-retaining spring clips.

- 4.5-30VDC input
- Simple two-wire installation

Specifications	QP5581
Type Of Display	LED
Digits	3 Digits (999)
Input	4.5-30VDC
Accuracy	1%
Refresh Speed	300ms
Working Current	<23mA
Weight	16g
Dimensions	48(W) x 29(H) x 22(D)mm
Panel Cutout Size	45(L) x 26(W)mm

	Cat.	Qty 1+	Qty 5+	Qty 10+
Voltmeter	QP5581	$14.95	$13.45	$11.95

Self-Powered LED Panel Ammeter

Simple and easy to install self-powered ammeter for current display. It has 4-wire connection with an included current shunt. Auto zero calibration and easy to read red LED display. Give your next project a truly professional look. Perfect for automotive, caravan or 4WD use.

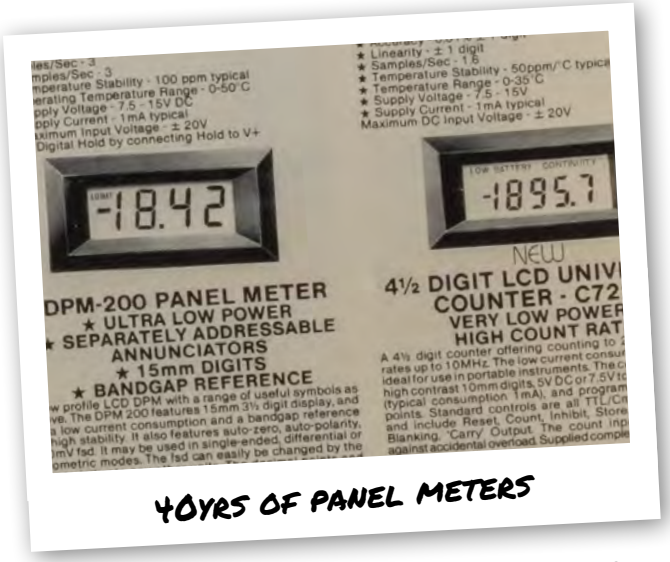
- Cutout size 42 x 23mm
- Easy installation
- Reverse Polarity protection
- Auto zero calibration
- Self powered

Specifications	QP5588
Power Requirements	8 - 30VDC
Measurement Range	0 - 50ADC
Maximum Display Count	1999
Sample Frequency	400mS

Current shunt included.

Note! When connecting the ammeter QP5588 it is essential that the wiring instructions provided with the product are followed, or the meter may be destroyed.

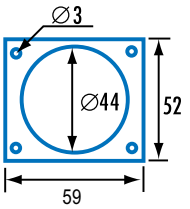
	Cat.	Qty 1+	Qty 5+	Qty 10+
Ammeter	QP5588	$39.95	$35.90	$31.90



PANEL METERS - MU45

Panel Meters Style MU45 - Moving Coil Type

- Overall Dimensions: 59(W) x 52(H)mm
- 44mm meter hole
- MU45
- Class 2.5



QP5013

QP5016

Cat.	Coil resistance	Scale
QP5010	200 Ω	0-1mA
QP5012	3,000 Ω	0-50µA
QP5013	0.05 Ω	0-1A
QP5014	0.01 Ω	0-5A
QP5015	0.005 Ω	0-10A
QP5016	0.003 Ω	0-20A
QP5020	20,000 Ω	0-20V
QP5022	30,000 Ω	0-30V

Cat.	Qty 1+	Qty 3+	Qty 6+
Any of the above	$17.95	$15.95	$14.35

HEAVY DUTY CURRENT SHUNTS

Heavy Duty Current Shunts

Placed in series with a high power circuit, these shunt bars allow you to measure high current draw without needing a high current ammeter. Heavy duty brass construction and hand calibrated, they include large terminals for connection of the main circuit cables and smaller terminals for connection to a meter. Suitable for use with a standard multimeter or panel meter you simply measure the millivolts across the shunt to display the current draw of the circuit. Models are compatible with many readily available power meters.

NOTE: Care must be taken with digital panel meters and current shunts. Some meters allow their negative power input to be common with the measured supply. Others require completely isolated supplies. Check the datasheet carefully.

QP5412
QP5415

Diagram on web.

MANUFACTURERS: We have a shunt supplier who is impossible to beat for prices and quality. We can supply custom shunts in quantities as little as 100 pieces. Contact our wholesale supplier for details.

Cat.	Max current	Voltage at Max Current	Shunt resistance	Accuracy
QP5410	5A	50mV	10mΩ	0.5%
QP5412	50A	50mV	1mΩ	0.5%
QP5415	100A	50mV	0.5mΩ	0.5%
QP5417	200A	50mV	0.25mΩ	0.5%

Max current	Voltage at Max Current	Cat.	Qty 1+	Qty 5+	Qty 10+
5A	50mV	QP5410	$19.95	$17.95	$15.95
50A	50mV	QP5412	$19.95	$17.95	$15.95
100A	50mV	QP5415	$24.95	$22.45	$19.95
200A	50mV	QP5417	$24.95	$22.45	$19.95

Tech talk

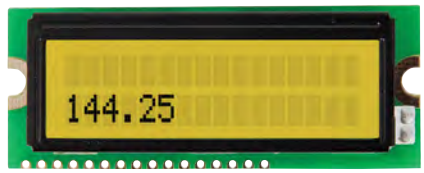
HOW TO INSTALL A CURRENT SHUNT

- **Voltmeter is on millivolt scale**
- **Voltmeter connections to shunt are on each side of shunt**
- **If current is DC observe polarity. If AC amps connect either way**
- **Specs of shunt generally stamped on the shunt itself ie. 50mV/50A (volt drop across shunt) equates to 5, 10, 20A max current, etc. i.e. A 25mV reading on the millivolt meter would equate to 25A current on a 50mV/50A shunt. You can read the current straight off the millivolt scale on the meter.**

LCD MODULES

LCD Panel 2 Line 16 Character Compact with Backlight & SIL Connections

This compact LCD module has 96 inbuilt ASCII characters as well as 92 special letters and 8 custom characters, which can be displayed on a 16 character by 2 line screen. It will hold the current input on the display using its own built in memory, making it easy to drive. Connections via single in line solder pads with an independent backlight.



Specifications	QP5512
Type	2 line LCD
Characters	16 x 2 lines
Character Size	4.89 x 2.78mm
Viewing Angle - Vertical	Sym 0 condition: CR>=2° , Min -10° Max 40°
Viewing Angle - Horizontal	Sym 0 condition: CR>=2° , Min -30° Max 30°
Suply Voltage For Logic	5VDC
Other Mechanical Data	Power supply current: 2mA, Duty: 1/16
Module Dimensions	66(W) x 26(H) x 12(D)mm
Viewing Display Area	51(W) x 14.8(H)mm

	Cat.	Qty 1+	Qty 5+	Qty 10+
Backlight	QP5512	$14.95	$13.45	$11.95

Dot Matrix LCD Modules - Alphanumeric

Compact Liquid Crystal Diode module with ASCII (96 characters), Special Letters (92 characters) and Custom Letters (8 characters). A two line screen displays up to 16 characters at a time and the module will hold the current display in its own inbuilt memory.

Specifications	BOTH
Type	Alphanumeric, 2 line LCD
Characters	16 x 2 lines
Character Size	4.89 x 2.78mm
Viewing Angle - Vertical	Sym 0 condition: CR>=2°, Min -10° Max 40°
Viewing Angle - Horizontal	Sym 0 condition: CR>=2°, Min -30° Max 30°
Supply Voltage For Logic	VDD - VSS Min 4.5V Typ 5V Max 5.5V
Backlight	Yellow green
Module Dimensions	85(W) x 30(H) x 13.2(D)mm
Viewing Display Area	65(W) x 16(H)mm

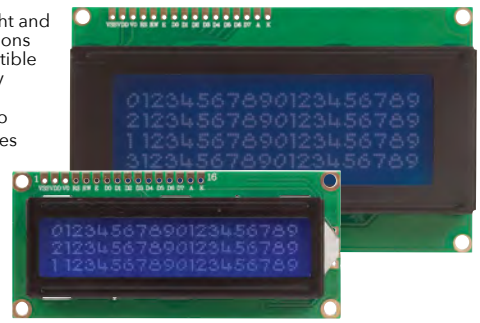
	Cat.	Qty 1+	Qty 10+	Qty 25+
Without Backlight	QP5515	$12.95	$11.45	$8.95
With Backlight	QP5516	$19.95	$17.95	$13.95

Dot Matrix White on Blue LCD

A HD44780 compatible character LCD display which features white backlit text on a blue background for great readability in all conditions. It features two lines of 16 characters, and is the same module as used in our XC4454 Arduino LCD Shield. Suits XC3706 I2C Port expander.

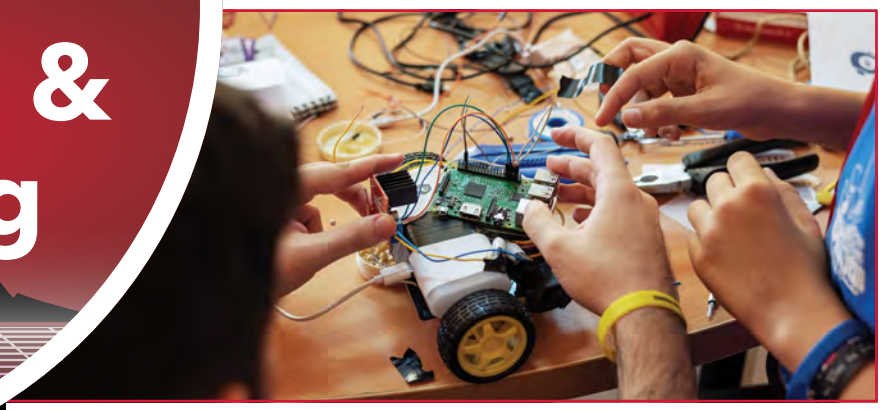
- 0.1" SIL connector for easy breaboarding/prototyping
- Can be controlled with 6 GPIO pins
- Nominal 5V supply with max 4.5mA operating current (excluding backlight)
- Separate backlight and contrast connections
- HD44780 compatible for use with many microcontrollers including Arduino
- 4 x Mounting holes

Note: Simulated displays.



	Cat.	Qty 1+	Qty 10+	Qty 25+
16 x 2 Character	QP5521	$19.95	$17.95	$13.95
20 x 4 Character	QP5522	$24.95	$22.45	$17.45

Projects & Learning



Arduino® Compatible Products	A83
Arduino® Projects	A84
Arduino® Shields & Modules	A86
Books	A139
Breadboards & Jumpers	A141
Clock Making	A125
Coding Products	A123
Construction - Mechanical	A128
Construction - Robot	A122
Electronics Projects	A129
Green Power	A127
Kids Coding Products	A123
Kits & Projects	A130
Kits for Kids	A120
Learning Kits	A134
Learn to Solder	A134
Mechatronics	A114
Microscopes	A126
Motors & Servos	A114
Prototyping	A141
Raspberry Pi & Accessories	A90
Retro Gaming	A111
Robotics	A123
Science Kits	A120
Short Circuits Learning System	A129
Solenoids	A117
STEM Education Resources	A120
Wearable Technology	A113

ARDUINO® STARTER KIT

NEW

Arduino® Starter Kit

This offical kit from Arduino® includes all the essentials to get you started in the exciting world of Arduino®. The kit includes the Arduino® UNO board, which is one of the best boards to learn about first, along with a breadboard and plenty of prototyping accessories. Components include LEDs, resistors, switches, a potentiometer, a buzzer, a motor with fan, which can make any of the five projects described in the printed user manual, and for other projects you can find online. A generous amount of coloured jumper wires are also supplied. The kit makes the perfect gift for a young electronics enthusiast or maker in the making.

The Starter Kit includes:

- 1 x Projects Book (170 pages)
- 1 x Arduino® UNO
- 1 x USB cable
- 1 x Breadboard 400 points
- 70 x Solid core jumper wires
- 1 x Easy-to-assemble wooden base
- 1 x 9v battery snap
- 1 x Stranded jumper wires (black)
- 1 x Stranded jumper wires (red)
- 6 x Phototransistor
- 3 x Potentiometer 10kOhms
- 10 x Pushbuttons
- 1 x Temperature sensor [TMP36]
- 1 x Tilt sensor
- 1 x alphanumeric LCD (16x2 characters)
- 1 x LED (bright white)
- 1 x LED (RGB)
- 8 x LEDs (red)
- 8 x LEDs (green)
- 8 x LEDs (yellow)
- 3 x LEDs (blue)
- 1 x Small DC motor 6/9V
- 1 x Small servo motor
- 1 x Piezo capsule [PKM17EPP-4001-B0]
- 1 x H-bridge motor driver [L293D]
- 1 x Optocouplers [4N35]
- 2 x Mosfet transistors [IRF520]
- 5 x Capacitors 100uF
- 5 x Diodes [1N4007]
- 3 x Transparent gels (red, green, blue)
- 1 x Male pins strip (40x1)
- 20 x Resistors 220 Ohms
- 5 x Resistors 560 Ohms
- 5 x Resistors 1 kOhms
- 5 x Resistors 4.7 kOhms
- 20 x Resistors 10 kOhms
- 5 x Resistors 1 MOhms
- 5 x Resistors 10 MOhms

Arduino® UNO board included

ARDUINO

	Cat.	Qty 1+
Starter Kit	XC9200	$169.00

For next day delivery, or Click and Collect, see page A4

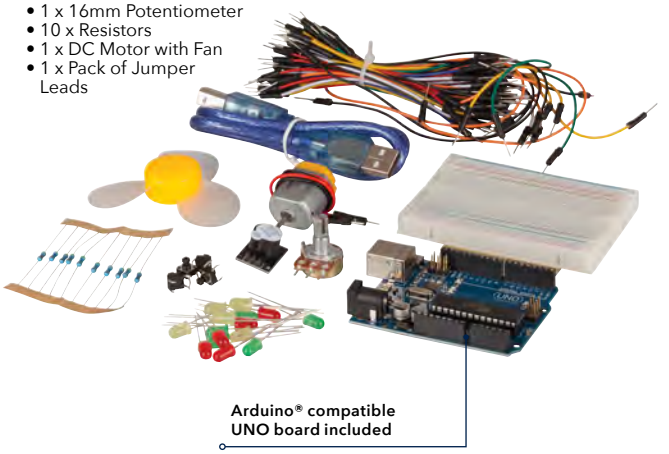
ARDUINO® COMPATIBLE KITS

Arduino® Compatible Starter Kit

This kit includes all the essentials to get you started in the exciting world of Arduino®. The kit includes the Arduino®-compatible UNO board, which is one of the best boards to learn about first, along with a breadboard and plenty of prototyping accessories. Components include LEDs, resistors, switches, a potentiometer, a buzzer, a motor with fan, which can make any of the five projects described in the printed user manual, and for other projects you can find online. A generous amount of coloured jumper wires are also supplied. The kit makes the perfect gift for a young electronics enthusiast or maker in the making.

Box Contents:

- 1 x Duinotech UNO Arduino®-Compatible Board
- 1 x USB Cable
- 1 x Breadboard
- 5 x 5mm Red LED
- 5 x 5mm Yellow LED
- 5 x 5mm Green LED
- 4 x Tactile Switches
- 1 x Buzzer Module
- 1 x 16mm Potentiometer
- 10 x Resistors
- 1 x DC Motor with Fan
- 1 x Pack of Jumper Leads



duinotech

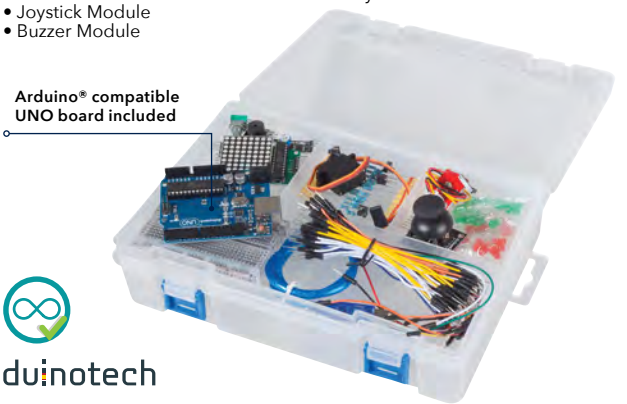
	Cat.	Qty 1+	Qty 3+	Qty 6+
Includes UNO Board	XC3902	$39.95	$35.95	$31.95

Duinotech Learning Kit - Perfect for Beginners

Looking to get into Arduino® but don't quite know where to start? We have specially selected the components in this kit to allow an easy entry into the world of Arduino® and to work with the examples included with the Arduino® IDE. There are many resources online to teach how the Arduino® software and hardware interact. This kit is also compatible with the full range of Duinotech shields and modules, which can be used to extend your Arduino® experience.

The Starter Kit includes:

- Duinotech UNO Arduino® Comatible Board with USB Cable
- Breadboard
- Jumper Wires
- Servo Motor
- LDR Light Sensor Module
- RGB LED Module
- Joystick Module
- Buzzer Module
- LED Matrix Module
- Line Trace Module
- Assorted LEDs
- Pushbuttons
- Assorted Resistors
- Carry case with insert tray and dividers



duinotech

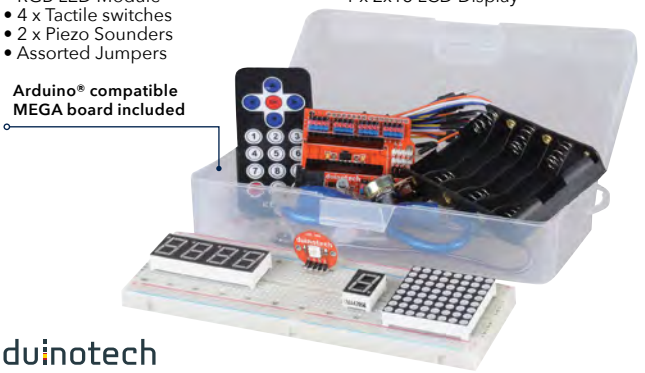
	Cat.	Qty 1+	Qty 3+	Qty 6+
Includes UNO Board	XC3900	$59.95	$53.95	$47.95

Duinotech MEGA Kit

This handy kit includes an Arduino® compatible MEGA development board, a breadboard, and an extensive range of components to make any number of exciting Arduino® related projects. The wide assortment of components has been carefully selected based on the most common Arduino® project you find online today. Input related components include switches, and sensors to detect light and temperature. Output related components include buzzers, relays, and displays. The displays include coloured LEDs, 7 segment displays, a 8x8 dot matrix, and an LCD screen. There is also an infrared remote control and receiver to make your own remote controlled projects. When not in use, the components can be safely stored away in the supplied storage organiser.

Box Contents:

- 1 x duinotech MEGA Arduino®-Compatible Board
- 1 x Solderless breadboard
- USB Cable
- 1 x 4 Digit Seven Segment Display
- 1 x 1 Digit Seven Segment Display
- 1 x 8x8 Dot Matrix Display
- 1 x 6AA battery holder
- Assorted Resistors
- Assorted LEDs
- RGB LED Module
- 4 x Tactile switches
- 2 x Piezo Sounders
- Assorted Jumpers
- 1 x 74HC595 Shift Register
- 1 x 50k Potentiometer
- 2 x Light Dependant Resistors
- 1 x Infrared Photo Diode
- 1 x Infrared Remote Receiver
- Analog Temperature Sensor
- 1 x 17 Button IR remote control
- 1 x Solderless breadboard
- 1 x 40-pin header
- 1 x Two channel relay module
- 1 x 2x16 LCD Display



duinotech

	Cat.	Qty 1+	Qty 3+	Qty 6+
Includes MEGA Board	XC4286	$109.00	$97.95	$86.95

ARDUINO® SENSOR KIT

Arduino® Sensor Kit with 10 Sensors plus Shield

The Arduino® Sensor Kit is made for Makers who have just started using Arduino® to explore the vast space of electronics and programming. This kit teaches how to connect and program basic Grove modules that includes both sensors and actuators along with the Arduino® UNO. Grove is an open-source, modulated, and ready-to-use toolset and takes a building block approach to assemble electronics. This Kit includes a Base Shield to which the various Grove modules can be connected both individually, or together in various combinations to create fun and exciting projects. All of the modules use a Grove connector, which connects each of the components to a Base Shield in just a few seconds. The Base Shield can then be mounted on to an Arduino® UNO board and can be programmed using the Arduino® IDE. Instructions for connecting and programming the different modules are also included in this kit. This kit was elaborated in collaboration with Seeed Studio and provides the Arduino® community with the opportunity to build projects with minimal effort of both wiring and coding. This kit acts as a bridge to the world of Grove and provides a flexible way for Makers to extend their projects to include other complex Grove modules. The Kit comes includes access to an online platform with all the instructions required to plug, sketch and play with the different Grove Modules.

Arduino® UNO board not included.

ARDUINO

	Cat.	Qty 1+
	XC9201	$59.95

ARDUINO® COMPATIBLE BOARDS

Duinotech Classic (UNO R3)

The flagship of our duinotech family, the duinotech Classic is a 100% Arduino®-compatible development board. Its stackable design makes adding expansion shields a piece of cake. Powered from 7-12VDC or from your computer's USB port. In the past few years the Arduino® has taken the electronics world by storm. Everyone from hobbyists to professional engineers is making use of its limitless versatility. And it's not just for tech-heads; its easy to learn programming has made the Arduino® a hit with artists and educators as well.

- Fully Arduino® UNO Compatible
- ATmega16U2 USB-Serial Chipset

Best Seller

duinotech

Specifications	XC4410
ATmega328P Microcontroller	Program Memory: 32kB (2KB used by bootloader) EEPROM: 512 bytes, SRAM: 2kB Speed: 16MHz
IO	Digital IO: 14 pins (6 are configurable as Digital or PWM) PWM Capable: 6 pins, Analog Inputs: 6 pins Serial Ports: 1 (more supported via SoftwareSerial library)
Input Voltage	5VDC Regulated via USB port or 5V pin, 7-14VDC via Vin pin On-board regulator supplies 5V when unit is powered via Vin pin
Dimensions	75(W) x 53(L) x 13(H)mm

	Cat.	Qty 1+	Qty 5+
UNO	XC4410	$29.95	$26.95

Duinotech Classic with Wi-Fi

An Arduino® compatible UNO board with an integrated ESP8266 board, which makes it easy to connect your projects to the cloud without the need for additional modules. Features the ATmega328P and standard UNO layout, and includes a set of DIP-switches to configure the serial connections.

duinotech

Specifications	XC4411
Processor:	ATmega328P (16MHz)
Memory:	32KB Flash, 2KB SRAM, 1KB EEPROM
Connectivity:	SPI, UART, I2C, 14 Digital GPIO (6 PWM), 6 Analogue (10-bit ADC)
ADC:	6 pins, 10-bit ADC
Voltage:	5V with regulator on board (accepts 7V - 12V)
ESP8266 Specifications:	
Processor:	ESP8266 32bit RISC (80MHz)
Memory:	32MB Flash included on board
Connectivity:	IEEE 802.11 b/g/n Wi-Fi
IO:	SPI, I2C, I2S, UART, 5 Digital GPIO, 1 Analogue (10 bit ADC)
Voltage:	3.3V with regulator on board (fed from Arduino)

	Cat.	Qty 1+	Qty 3+	Qty 6+
UNO with Wi-Fi	XC4411	$39.95	$35.95	$31.95

Clear Acrylic Enclosures For Arduino®

Protect your Arduino® board against damage, dust and scratches with this clear acrylic enclosure. The case is easy to assemble and has been pre-drilled to provide easy access to all ports.

XC4406

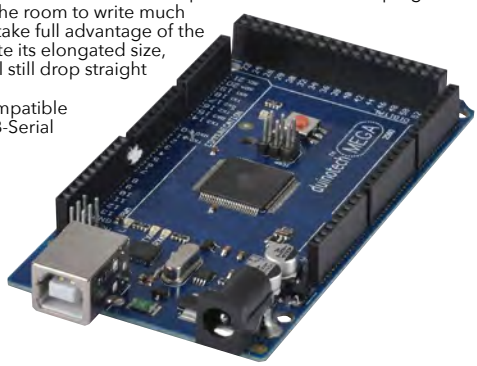
duinotech

	Cat.	Qty 1+	Qty 4+	Qty 10+
Suits UNO	XC4406	$4.95	$4.45	$3.95
Suits MEGA	XC4408	$6.95	$6.25	$5.55

Duinotech MEGA

Boasting more IO pins, more memory, more PWM outputs, more Analog inputs and more Serial ports, the MEGA is definitely one the Leader's of the duinotech pack. When you have a project that just needs more inputs, outputs & memory than the duinotech Classic (UNO) can deliver, the MEGA has them in spades. And with 8x the program memory, you have the room to write much larger programs to take full advantage of the increased IO. Despite its elongated size, standard shields will still drop straight onto this board.

- Fully Arduino® Compatible
- ATmega16U2 USB-Serial Chipset



duinotech

Specifications	XC4420
ATmega2560 Microcontroller	Program Memory: 256kB (4kB used by bootloader) EEPROM: 4kB, SRAM 8kB, Speed: 16MHz
IO	Digital IO: 54 pins (15 are configurable as Digital or PWM) PWM Capable: 15 pins, Analog Inputs: 16pins Serial Ports: 4 (1 is connected to on-board USB-Serial port)
Input Voltage	5VDC Regulated via USB port or 5V pin, 7-14VDC via Vin pin On-board regulator supplies 5V when unit is powered via Vin pin
Dimensions	108(W) x 53(L) x 15(H)mm

	Cat.	Qty 1+	Qty 5+	Qty 5+
MEGA	XC4420	$49.95	$44.95	$39.95

Duinotech MEGA with Wi-Fi

An Arduino® compatible MEGA board with an integrated ESP8266, which makes it easy to connect your projects to the cloud without the need for additional shields. Features the ATmega2560 and standard MEGA layout, and includes a set of DIP-switches to configure the serial connections.

duinotech

Specifications	XC4421
Processor:	ATmega2560 (16MHz)
Memory:	256KB Flash, 8KB SRAM, 4KB EEPROM
Connectivity:	SPI, 4x UART, I2C, 54 Digital GPIO (15 PWM), 16 Analogue (10-bit ADC)
ADC:	16 pins, 10-bit ADC
Voltage:	5V with regulator on board (accepts 7V - 12V)
ESP8266 Specifications:	
Processor:	ESP8266 32bit RISC (80MHz)
Memory:	32MB Flash included on board
Connectivity:	IEEE 802.11 b/g/n Wi-Fi
IO:	SPI, I2C, I2S, UART, 5 Digital GPIO, 1 Analogue (10 bit ADC)
Voltage:	3.3V with regulator on board

	Cat.	Qty 1+	Qty 3+	Qty 6+
MEGA with Wi-Fi	XC4421	$59.95	$53.95	$47.95

For next day delivery, or Click and Collect, see page A4

ARDUINO® COMPATIBLE BOARDS

Duinotech ATtiny85 Micro USB Development Board

This tiny development board features an ATtiny85 8-bit microcontroller that you can program using the Arduino® IDE to make projects that don't need all the performance of larger development boards such as the Arduino® NANO or UNO. It has an onboard micro USB socket for programming and power, and 6 x I/O connections. Power can also be provided directly via 5V, or by using the integrated 5V voltage regulator from a 7-35VDC supply (12V or less recommended).

- Integrated 5V Regulator
- Low power
- 8k Flash Memory (about 6k after bootloader)

duinotech

	Cat.	Qty 1+	Qty 3+	Qty 6+
ATtiny Micro USB	XC3940	$13.95	$12.45	$10.95

Duinotech Leonardo Tiny ATmega32U4 Development Board

This Arduino®-compatible development board is a smaller version of the popular Leonardo. It measures just 23 x 20mm and is a great choice when you need a low-cost and compact Arduino® project. The power and three of its analogue and digital pins go to large gold-plated tabs, making them suitable to connect alligator clips or for sewing onto clothing with conductive thread (sold separately). The board features a 32u4 ATMEL processor with a 16MHz clock, 10 x digital pins, 5 x analogue pins, 4 PWM pins, ICSP, I2C, and a serial port.

- 16MHz Clock Speed
- 32kB Flash Memory (4kB used by bootloader)
- 1kB EEPROM Memory

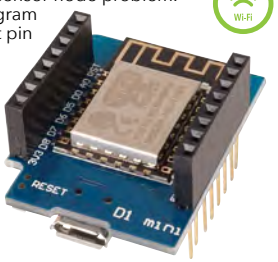
duinotech

	Cat.	Qty 1+	Qty 3+	Qty 6+
Leonardo Tiny	XC4431	$21.95	$19.45	$17.45

Duinotech Wi-Fi Mini ESP8266 Main Board

The ESP8266 based Wi-Fi Mini board packs an 80MHz microcontroller with Wi-Fi into a board not much bigger than a coin. With easy-to-add support for the Arduino® IDE, the Wi-Fi Mini is the perfect compact solution to your IoT sensor node problem. Includes 4MB of flash memory for your program and 11 digital IO pins and one analog input pin to interface to the world.

- 3.3V operating and IO voltage
- 5V-3.3 converter onboard for operation from USB
- Arduino® Add-on available
- XC3850 Prototyping Shield available for adding extra hardware



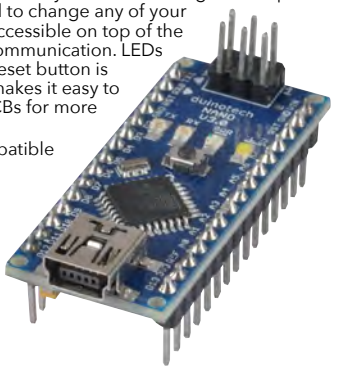
duinotech

	Cat.	Qty 1+	Qty 3+	Qty 6+
Wi-Fi Mini	XC3802	$24.95	$22.45	$19.95

Duinotech NANO

This is the most breadboard friendly Arduino®-compatible device you will find. Despite its small size, it packs virtually all the features of the full duinotech boards into a tiny DIP-style board that drops directly into your breadboard. It uses exactly the same ATmega328 chip as its larger cousins, so there is no need to change any of your coding. A Mini-B-USB port is easily accessible on top of the board for programming and serial communication. LEDs show power and serial status and a reset button is easily accessible. Its small DIP-style makes it easy to embed into Veroboard or custom PCBs for more advanced projects.

- Fully Arduino® and duinotech Compatible
- FT232RL USB-Serial Chipset
- USB cable included
- See website for full specs



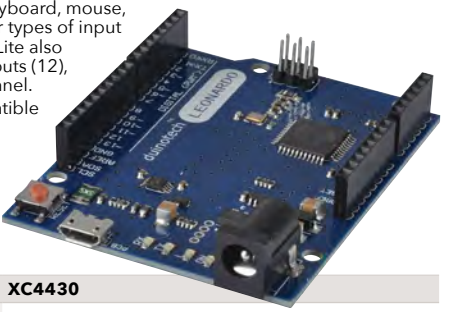
duinotech

	Cat.	Qty 1+	Qty 5+
NANO	XC4414	$29.95	$26.95

Duinotech Lite (Leonardo R3)

Most of the duinotech models use two chipsets, one for the main controller, one for USB communication. The duinotech Lite combines both these functions into a single IC. This opens the door for more advanced USB functions. Now you can have your Duinotech Lite emulate a computer keyboard, mouse, joystick and many other types of input device. The duinotech Lite also boasts more analog inputs (12), and an extra PWM channel.

- Fully Arduino® Compatible
- Built in USB-Serial



duinotech

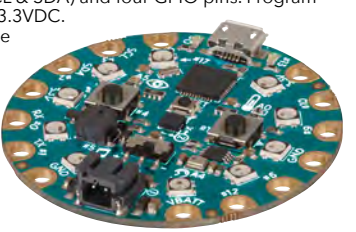
Specifications	XC4430
ATmega32U4 Microcontroller	Program Memory: 32kB (4KB used by bootloader) EEPROM: 1kB, SRAM: 2.5kB, Speed: 16MHz
IO	Digital IO: 20 pins (7 are configurable as digital or PWM) PWM Capable: 7 pins Analog Inputs: 12 pins (6 are shared with digital pins) Serial Ports: 2 (1 USB, 1 UART, more supported via SoftwareSerial library)
Input Voltage	5VDC Regulated via USB port or 5V pin 7-14VDC via Vin pin On-board regulator supplies 5V when unit is powered via Vin pin
Dimensions	75(W) x 53(L) x 13(H)mm

	Cat.	Qty 1+	Qty 5+
Leonardo	XC4430	$29.95	$26.95

Duinotech Lilypad Plus

An all-in-one Arduino®-compatible board to add dazzling effects to your next project or costume. The round-shaped board features ten mini RGB LEDs, a motion sensor (accelerometer), temperature sensor (thermistor), light sensor (phototransistor), microphone, buzzer, left and right push-buttons, slide switch, and more to suit a wide variety of applications. The fourteen power and I/O pads around the edge of the board are alligator clip friendly for prototyping purposes, can be soldered, mounted with metal screws, or sewn into your costume using conductive thread (sold separately). The onboard ATmega32u4 8-bit AVR microcontroller runs your Arduino® code, and the eight I/O connections include Serial TX, Serial RX, I2C (SCL & SDA) and four GPIO pins. Program and power the board from USB or 3.3VDC.

A battery pack (6V max.) can also be connected to make your project completely portable. The USB port has HID support to act like a keyboard, mouse, joystick or MIDI, and the eight non-power related pads can be used as capacitive touch applications.



duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC3920	$34.95	$30.95	$27.95

Duinotech Wearable ESP32 Development Board

With this compact yet powerful ESP32 wearable development board, you can take your costumes and wearable technology to the next level, including Smartphone control. The board has all the features of an ESP32 including Wi-Fi and Bluetooth®, but on a 56mm diameter board that can be sewn onto fabric or similar material using conductive thread (sold separately).

There is a provision to connect a rechargeable battery for portable applications, and programming is performed easily via the onboard micro USB port with the Arduino® IDE through the ESP32 add-on.

duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC3810	$39.95	$35.95	$31.95

Arduino® Compatible

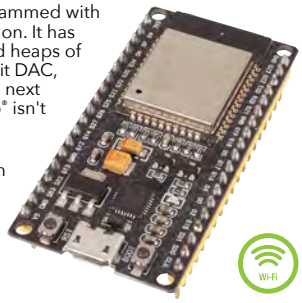
Raspberry Pi Compatible

ARDUINO® COMPATIBLE BOARDS

ESP32 Main Board with Wi-Fi and Bluetooth®

The ESP32 is a powerful dual core microcontroller featuring Wi-Fi and Bluetooth®, and thanks to the efforts of the Arduino® community, is able to be programmed with the Arduino® IDE through the ESP32 addon. It has 512kB of RAM, 4MB of flash memory and heaps of IO pins with features like 12 bit ADC, 8 bit DAC, I2S, I2C, touch sensor and SPI. This is the next step up if a standard AVR based Arduino® isn't powerful enough to do what you need.

- 3.3V operating and IO voltage
- 5V-3.3 converter onboard for operation from USB
- Arduino® Addon available (installation required)
- Micropython firmware available



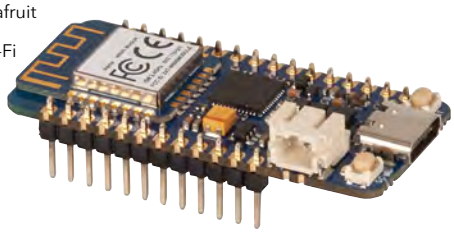
Bluetooth®

	Cat.	Qty 1+	Qty 3+	Qty 6+
ESP32 with Wi-Fi & Bluetooth®	XC3800	$39.95	$35.95	$31.95

SAMD21 Wireless Development Board

A compact Arduino® compatible board with an integrated W600 Wi-Fi module, making it ideal for compact and low-power IoT projects. It features 6 analog and 14 digital pins, a UART, I2C, and ICSP port. It has a USB Type-C socket for 5V power and programming, and there is also provision to connect and charge a 3.5-4.2V Li-po battery (not included) for portable applications.

- Arduino® Zero & Adafruit Feather Compatible
- 2.4GHz onboard Wi-Fi module supports 802.11 b/g/n



duinotech

	Cat.	Qty 1+	Qty 3+	Qty 6+
SAMD21 Wireless	XC3812	$69.95	$62.95	$55.95

ARDUINO® VS RASPBERRY PI

DIFFERENCES, STRENGTHS & WEAKNESSES

If you're new to this technology, you might be a little confused around what the primary differences are, and how they're used. While there are certainly many similarities on the surface, the reality is that these are more like "compatibilities", than fundamental similarities.

Raspberry Pi and Arduino® both represent different corners of programming and computing. While there's certainly some crossover in what you can make with them, many projects will squarely suit one or the other. Just as a semi-trailer is better at hauling freight than taking kids to school, Raspbery Pi and Arduino® Compatible hardware will suit certain projects over others too. Here's a little information to help you figure it out.

RASPBERRY PI OVERVIEW	ARDUINO® OVERVIEW
Raspberry Pi is a mini computer, essentially like a low-powered version of your computer at home. They often run a simplified version of Debian Linux called Raspbian, which makes it great for running multiple applications and has support for Full HD 1080p graphics, even 4K for the latest Raspberry Pi 4. Raspbian provides you with a user interface just like a regular computer, so you can use a mouse and keyboard to surf the internet, work on spreadsheets, code websites, and so much more. Overall this provides power and flexibility for your applications, however increases power consumption and can be less stable (just like your computer) due to complexity.	Arduino® compatible hardware is essentially just a microcontroller. Arduino®-compatible hardware comes in all shapes and sizes, so it really needs to be considered as an approach to programmable hardware, than a specific capability or product. Arduino® is like a versatile version of embedded electronics that you'd find in your microwave, a digital timer, a home router, many kids toys, and much more. Arduino® boards essentially run one application at a time, which is programmed directly on to the board itself. This "single minded" approach means the software you develop can run reliably for very long periods and automatically starts going again if the board is power cycled too.
Type: Very much like a full-size computer including operating system with multi-tasking and regular HDMI support for using a monitor.	**Type:** Single application / single threaded programming approach. Great for simple, reliable hardware operation. Screen connection is possible with compatible hardware, however no rich graphics or video.
Coding: Edit and recompile code in-place, in a variety of languages. The most popular language for development on a Raspberry Pi is Python.	**Coding:** Requires a host computer (or capable hardware) to edit and recompile code. Primary language is C++ in the Arduino® programming environment. It is possible to use other languages but less common.
Power: A full size Raspberry Pi 4 requires a 15W power supply. That's quite a lot of power for battery-powered projects. Some smaller Raspberry Pi boards (such as Zero W) use less power, and can get down to around 0.5W by shutting off the display ports and such.	**Power:** Generally quite low power consumption, with very simple options to reduce overall usage to mere micro-amps, in certain cases (mostly depending on attached hardware).
Storage: Onboard microSD provides an easy route to store data. If that's not enough you can attach an external USB hard drive (or multiples) for virtually unlimited direct-attached storage.	**Storage:** A storage shield is generally required in order to expand beyond the limited onboard memory for Arduino® compatible hardware. If you're using a Wi-Fi/Ethernet compatible board, pushing data to the cloud is generally easiler where possible.
Connectivity: Rich peripherals such as cameras and displays are fundamentally supported as well as network (Wi-Fi or wired) on most models.	**Connectivity:** Some boards include onboard Wi-Fi, with sheilds available to extend functionality if required.
Functionality: Linux packages are often available for powerful functionality such as Machine Learning, web servers, network management, and so much more. Due to the popularity of Raspberry Pi, many common requirements have Raspbian-dedicated packages available.	**Functionality:** There are many code libraries available in the Arduino® community which expand functionality and simplify peripheral connection. However this does not extend to generalised computing as Arduino® hardware is not really suitable for this purpose.
GPIO: The GPIO (general purpose input output) interface provides great hardware attachment for inputs such as sensors and switches, as well as outputs such as LEDs and motors.	**GPIO:** The GPIO (general purpose input output) varies based on the board you're using, however they're generally very powerful with more
Open Source: Raspberry Pi uses open source software, but is not open hardware. While some imitators do exist, you'll more than likely be using official Raspberry Pi hardware. This has the benefits of compatability and reliability, but some in the community are frustrated with the lack of flexibility in what is a very "sharing" community.	**Open Source:** Arduino® is entirely open source and open hardware, so you may or may not be using official Arduino® hardware. There are more Arduino®-compatible third party boards around than genuine ones. However most people still use the official Arduino® IDE to code their boards. Because they're open hardware, most board designs are virtually identical to official versions, with differences mostly cosmetic only.
Communications: Easy interface with virtually all communication protocols making peer to peer and API integration fairly simple. Support for SSL and other secure transmissions is generally no issue, however more complex functions may reach processor limitations.	**Communications:** Supports a good variety of external communications including for use with APIs and peer-to-peer systems. However some aspects such as supporting secure socket layers (SSL) can overload the microcontroller depending on the data and complexity / frequency.
Applications: Ideal applications: media centres, home automation projects, AI / Machine Learning education, cloud-controlled cameras, complex user-interface projects, and so much more.	**Applications:** Popular uses: environment sensors, retrofitted smart devices, lighting controllers, servo controllers, simple robots, simple user interface controls, intelligent control management projects, and so much more.

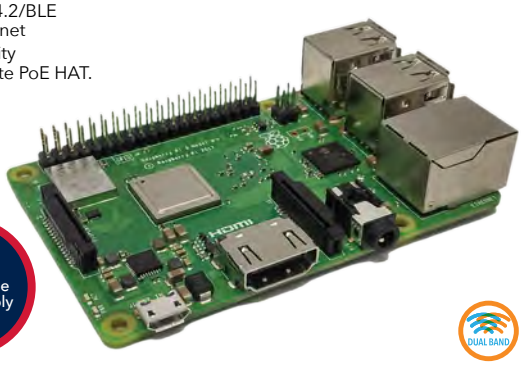
RASPBERRY PI & ACCESSORIES:

Our range of Raspberry Pi products and compatible accessories continues to grow. We have added the more powerful Pi 4B 8GB SBC to the range and the Pi 400 computer/keyboard all-in-one, which is great for anyone just starting their Raspberry Pi journey. We will continue to expand the range so make sure you keep an eye on our website for more exciting new Pi products.

Raspberry Pi 3B+ Single Board Computer

The latest product in the Raspberry Pi3 range.
Modular compliance certification allows the board to be designed into end products without the need for further wireless compliance testing.

- 64-Bit quad core processor running at 1.4GHz
- Dual band 2.4GHz / 5.0GHz wireless
- Bluetooth® 4.2/BLE
- Faster Ethernet
- PoE capability via a separate PoE HAT.



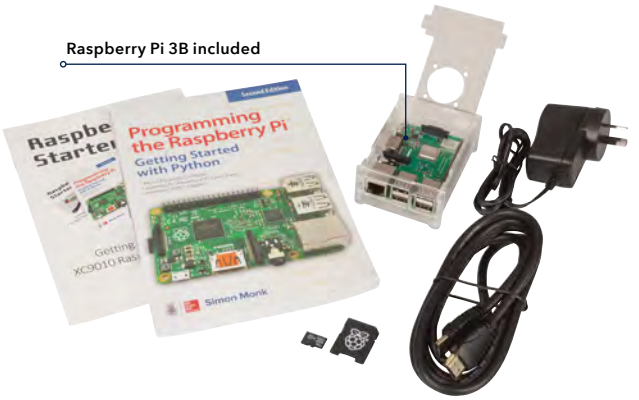
p.A89 switchmode power supply

DUAL BAND

	Cat.	Qty 1+
Raspberry Pi 3B+	XC9001	$89.95

Raspberry Pi Starter Kit

The Raspberry Pi has been designed as a computer that anyone can use. If you want to get started with a Raspberry Pi, but don't know where to start, then this kit has just about everything you need. Ideal for those starting out, or even as a basic educational computer for a student. You will also need a USB keyboard, mouse, HDMI monitor/TV & HDMI cable. Includes Raspberry Pi 3B, acrylic case, power supply, USB cable, Getting Started Guide, Book (Programming the Raspberry Pi: Getting Started with Python), and microSD card loaded with NOOBS software



	Cat.	Qty 1+
Raspberry Pi Starter Kit	XC9010	$149.00

Compatability Icons

To assist you in selecting compatible products for your preferred microcontroller, we have created two icons. They should help you select appropriate modules and hardware. If in doubt, ask our friendly team.

Arduino® Compatible

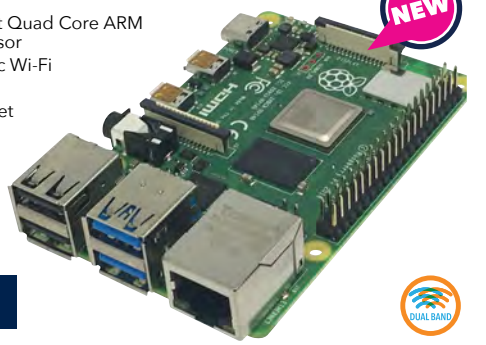
Raspberry Pi Compatible

Raspberry Pi 4B Single Board Computer

Developed in the United Kingdom by the Raspberry Pi Foundation to promote teaching of basic computer science in schools.It is powered via a USB-C port, enabling additional power to be provided to downstream peripherals, when used with an appropriate PSU.

- 1.5 GHz 8GB 64-Bit Quad Core ARM Cortex-A72 Processor
- On-Board 802.11ac Wi-Fi
- Bluetooth® 5
- Full Gigabit Ethernet
- 2 x USB 2.0 ports
- 2 x USB 3.0 ports
- Dual Monitor Support (4K resolution)

NEW



4GB & 8GB Models Available

DUAL BAND

	Cat.	Qty 1+
Raspberry Pi 4B 4GB	XC9100	$109.00
Raspberry Pi 4B 8GB	XC9104	$145.00

Raspberry Pi 400 Keyboard Desktop Computer

The Raspberry Pi 400 (Australian Keyboard Layout) puts the power of a Raspberry Pi 4 (4GB RAM) inside a keyboard in a layout any retro home-computer fan will be familar with. Whilst the "Keyboard Raspberry Pi" layout was clearly inspired by the iconic Commodore 64, the quad-core 64-bit SoC (ARM Cortex-A72 @ 1.8GHz) makes the C64's chip look like a Dorito. The combination of the fast CPU and 4GB memory makes the Raspberry Pi 400 perfect for everything from retro-computer games to thin clients. You can connect the Pi 400 to any modern Monitor TV via HDMI for crisp 4K HD visuals.

- Dimensions: 286(L) x 122(W) x 23(D)mm

NEW

	Cat.	Qty 1+
	XC9115	$125.00

16GB NOOBS SD Card for Raspberry Pi

A 16GB microSD card with fullsize SD card adapter preloaded with the NOOBS software, allowing easy install of the standard Raspbian operating system. Great option for beginners who aren't comfortable imaging their own cards. Also includes Librelec media player as an install option.

The following operating systems are also able to be downloaded and installed by NOOBS (internet connection needed):

- Raspbian Lite
- Lakka
- OSMC
- Screenly
- Windows 10 IOT Core

	Cat.	Qty 1+
16GB NOOBS SD Card for RPi	XC9030	$24.95

RASPBERRY PI ACCESSORIES CONTINUED

Power Supply for Raspberry Pi 4

This switchmode power supply delivers 15.3W (5.1V/3A) of power as per Raspberry Pi 4 specifications. The 1.5m lead is terminated with a USB Type-C plug and has a handy inline ON/OFF switch.

Specifications	XC9122
Output	5.1V 3A
Input	100-240VAC
Power	15.3W
Cable length	1.5m with switch

	Cat.	Qty 1+	Qty 5+	Qty 10+
USB Type-C	XC9122	$21.95	$19.45	$17.45

Power Supply for Raspberry Pi 3B+

This switchmode power supply delivers 12.7W (5.1V/2.5A) of power needed for your Raspberry Pi 3B, it can also be used for other USB-powered devices with a Micro B USB socket, including some Arduino® hardware, Bluetooth® speakers, and more. The 1.5m lead is terminated with a USB Micro B plug.

- Designed to take full advantage of the improved power management on the Raspberry Pi 3B+
- 1.5m lead with Micro B USB connector
- Use with Raspberry Pi, charge power banks, portable speakers etc.
- SAA approved and MEPS compliant

Specifications	MP3536
Input Voltage	100-240VAC
Output Voltage	5.1VDC
Output Current	2.5A
Cable Length	1.5m

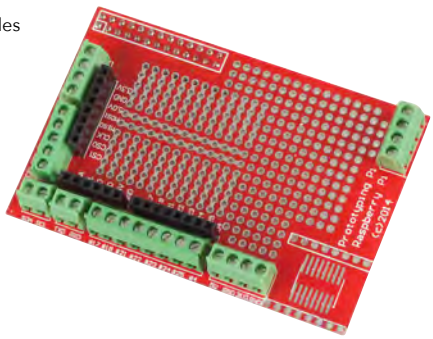
1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 5+	Qty 10+
USB Micro B	MP3536	$21.95	$19.45	$17.45

Prototyping Hat for Raspberry Pi

This prototyping hat for Raspberry Pi has a main area with gold plated holes that are spaced at the standard 2.54mm, making this ideal for use with DIP packaged ICs or sensors. Around the side of the board are 0.1" header strips and screw down terminals that tap into the GPIO, power and other interfaces for temporary (but robust) connection of components or wiring that can be easily removed. It also has a large prototyping area for PTH and SMD components.

- Large prototyping area for PTH/SMD components
- Screw Terminals
- Header connections
- Gold plated holes
- 2.54mm spacing of holes
- 26 pin GPIO
- SOIC Breakout
- Dimensions: 85(W) x 56(L)mm



	Cat.	Qty 1+	Qty 3+	Qty 6+
Prototyping Hat for Raspberry Pi	XC9040	$15.95	$13.95	$12.45

GPIO Expansion Kit

If you want to delve into the prototyping of hardware for the Raspberry Pi, then the GPIO expansion kit is a necessity. Using a colour coded rainbow ribbon cable, all 40 GPIO pins are broken out to a header which can be plugged straight into a breadboard. The header is clearly labelled with each pin name, making breadboarding of circuits super easy.

	Cat.	Qty 1+	Qty 3+	Qty 6+
GPIO Expansion Kit for RPi	XC9042	$12.95	$11.45	$9.95

Dual Card Adaptor For Raspberry Pi

Insert the SD card switch into your Raspberry Pi to switch between operating systems on separate microSD cards.

Please note: You must turn off the Raspberry Pi before switching the SD card. Failure to do so will damage the SD card.

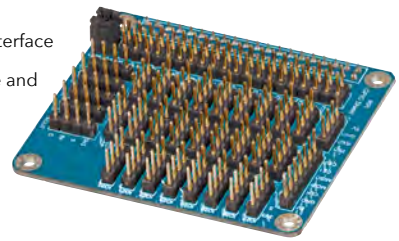
Specifications	XC9034
Card Slot Size	microSD
Max Card Size	32GB
Required Power	None
Dimensions	36 x 24mm

	Cat.	Qty 1+	Qty 4+	Qty 10+
	XC9034	$29.95	$26.95	$23.95

GPIO Expansion Shield for Raspberry Pi

This GPIO shield fixes on top of your Raspberry Pi so you can add high-precision AD/DA functions to your Raspberry Pi and connect multiple devices at the same time. The on-board PCF8591 IC provides four 8-bit analogue-to-digital converters and a single 8-bit digital to analogue converter.

- Four x ADC, 1 x DAC
- Operates through the I2C interface on the Raspberry Pi
- Includes mounting hardware and spacers
- Dimensions: 66(L) x 57(W) x 19(H)mm



	Cat.	Qty 1+	Qty 3+	Qty 6+
	XC9050	$14.95	$13.45	$11.95

Audio DAC Module for Raspberry Pi

This simple DAC can be used to create your own Raspberry Pi based music player or just improve the sound quality from your Raspberry Pi. Plugs directly onto your Pi & requires minimal setup using Volumio & RuneAudio. Compatible with any 38kHz IR remote control.

Specifications	XC9048
Sampling Frequency	384kHz
Resolution (Bits)	16-32
Digital Audio Interface	I2S
SNR	120dB
THD	-93dB
Dynamic Range	112dB
IR Receiver	38kHz

	Cat.	Qty 1+	Qty 3+	Qty 6+
	XC9048	$69.95	$62.95	$55.95

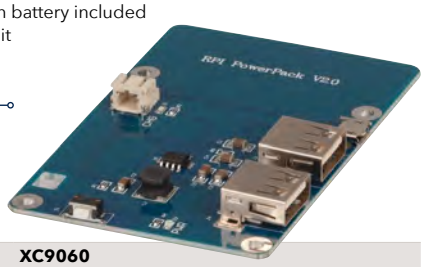
RASPBERRY PI ACCESSORIES CONTINUED

3.7V 3800mAh Li-ion Battery Pack

Make your Raspberry Pi project completely portable with this power expansion board with Li-ion battery pack. The expansion board is designed to attach directly below your Rasberry Pi and provide power from the 3800mAh Li-ion battery. Features two USB ports to power the RPi and another USB device, power switch, power and charging status LEDs, and an integrated charging module. Simply charge from an available USB port through the onboard micro USB socket. Mounting hardware included.

- High capacity 3.7V Li-ion battery included
- Onboard charging circuit
- Dual USB outputs

Battery included



Specifications	XC9060
Battery Capacity:	3800mAh
Max Discharge Current:	1.8A
No-Load Output Voltage:	5.1V
Charging Current:	1A
Cut-off Voltage:	4.18-4.2V
Dimensions:	85(L) x 56(W)mm

	Cat.	Qty 1+	Qty 4+	Qty 10+
	XC9060	$29.95	$26.95	$23.95

Stackable Header For Raspberry Pi

One of the essentials for building your own custom hat for Raspberry Pi. Perfect fit for the 40 pin GPIO header. Can also be used to break out a DIL connection to a breadboard by bending the pins slightly.

- 2 x 20 stackable header
- Extended body for extra spacing

	Cat.	Qty 1+	Qty 4+	Qty 10+
	HM3228	$4.95	$4.45	$3.95

RTC Clock Module

The XC9044 is a tiny RTC module which uses I2C to communicate with the Raspberry Pi. Once set up, it can be used to provide a battery backed clock source, and is ideal for situations where the Pi may be powered off and on or out of range of Wi-Fi where it cannot get a reliable time fix.

- Five Pin header that plugs straight onto the Pi's GPIO pins I2C interface based on highly accurate DS3231 IC

	Cat.	Qty 1+	Qty 4+	Qty 10+
RTC Clock Module for Raspberry Pi	XC9044	$9.95	$8.95	$7.95

5V PoE Power Splitter

This device splits the PoE into a regular ethernet plug and microB USB power plug. Provides 5VDC to power devices like Raspberry Pi or Arduino®.

Specifications	YN8416
PoE Voltage Input	44-57V
Voltage Output	5VDC@2.4A max
Connectors	1 x RJ45 PoE Socket 1 x RJ45 Ethernet Plug 1 x MicroB USB Plug
PoE Standard	IEEE 802.3af
Data Rate	10/100Mbps
Dimensions	88(L) x 30(W) x 26(H)mm

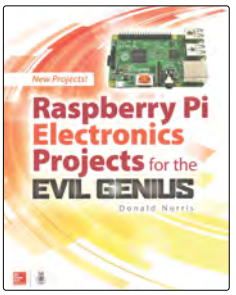
1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 4+	Qty 10+
5V Micro USB Plug	YN8416	$24.95	$22.45	$19.95

RASPBERRY PI BOOKS

Raspberry Pi Projects for Evil Genius

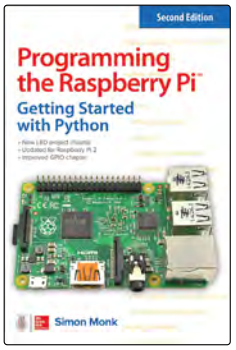
Each Evil Genius project includes a detailed list of materials, sources for parts, schematics, and clear, step-by-step assembly and programming instructions. Readers will get up and running right away by learning how to program a touchscreen, interface with an Arduino® processor, build a fully working cell phone—even build a super computer using a cluster of Pis! Advanced projects include a Software Defined Radio, robot controller, robotic arm, point-and-shoot camera, and a complete infrared surveillance system.



	Cat.	Qty 1+
RPi Projects for the Evil Genius	BM7162	$54.95

Programming the Raspberry Pi - Book

Don't be scared off by the name. Learning Python is a great way to getting to know the hardware on the Pi, and although this book is written for the Raspberry Pi 2, the hardware differences are small, and most of the book is perfectly suited to the Pi 3B.



	Cat.	Qty 1+
Programming the Raspberry Pi	BM7160	$34.95

Raspberry Pi Beginner's Guide Book - 3rd Edition

The Raspberry Pi is a small, clever, British-built computer that's packed with potential. Made using the same technology you find in a smartphone, the Raspberry Pi is designed to help you learn coding, discover how computers work, and build your own amazing things. Fully updated for Raspberry Pi 4, this book was written to show you just how easy it is to get started. Learn how to:

- Set up your Raspberry Pi, install its operating system, and start using this tiny, fully functional computer.
- Start coding projects, with step-by-step guides using the Scratch and Python programming languages.
- Experiment with connecting electronic components and have fun creating amazing projects.

	Cat.	Qty 1+
3rd Edition	BM7164	$27.95

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CATALOGUE DEPARTMENT - JAYCAR:

catalogue@jaycar.com

RASPBERRY PI ACCESSORIES CONTINUED

Enclosure for Raspberry Pi 3B

If you're using your Raspberry Pi as a computer, you probably don't want all the pins and wires exposed to short out. This compact case is the perfect thing for protecting your Pi in fact it wouldn't even look out of place sitting next to your TV if you are using the Pi as a media computer. It has openings for the USB, HDMI, Ethernet, 3.5mm, Micro USB and microSD card ports on the Pi, and includes four screws to secure the case closed. The removeable end panel features cooling holes, and overall, the case is only millimetres longer than the Pi itself. If you do want to tinker with your Pi, the top can be removed to allow access to the GPIOs and other headers. For easier access to the GPIO pins and other headers, see XC9004.

Includes:

Base, Lid, End Panel with vent holes & fixing screws

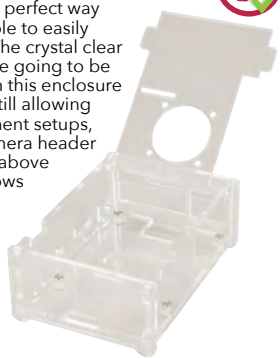
	Cat.	Qty 1+	Qty 4+	Qty 10+
Enclosure for Raspberry Pi	XC9002	$9.95	$8.95	$7.95

Clear Acrylic Case for Raspberry Pi 3B with GPIO Access

This simple snap-together enclosure is the perfect way to protect your Raspberry Pi, but still be able to easily access the GPIO pins and other headers. The crystal clear acrylic doesn't hide anything, and if you are going to be connecting and disconnecting things, then this enclosure will keep your Pi from shorting out, while still allowing access via the hinged lid. For semi-permanent setups, there are slots in the lid for the GPIOs, Camera header and Display header. Another hole directly above the processor provides ventilation and allows mounting a small cooling fan.

Includes:

- Six plates with cutouts for all Raspberry Pi connections
- Mounting nuts and bolts
- Insulating spacers



	Cat.	Qty 1+	Qty 4+	Qty 10+
Clear Acrylic Enclosure for RPi3	XC9004	$9.95	$8.95	$7.95

VESA Mount Case to suit Raspberry Pi 3B

Mount your Raspberry Pi 3B+ securely to the back of your monitor or TV. The perspex case is compatible with 100 x 100mm VESA mounts, and fits a 30mm fan (YX2500 sold separately) if cooling is required. Mounting screws included.

- Perspex
- Includes mounting screws
- Fits a 30mm fan (YX2500)

Specifications	XC9003
VESA mounting holes	100 x 100mm
Dimensions	122(L) x 112(W) x 30(D)mm

	Cat.	Qty 1+	Qty 4+	Qty 10+
	XC9003	$17.95	$15.95	$13.95

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Visit Our Online Store: www.jaycar.com.au

Official Raspberry Pi 3B Case

This is the official case for Raspberry Pi 3B designed by the Raspberry Pi Foundation. The snap-together case requires no tools and has numerous removable panels to allow access to GPIO pins and other internal connections such as the camera port. Deep slot for easy access to microSD card.

- Stylish red & white design
- Easy no-tools assembly
- Protect your Pi
- Light pipes for activity LEDs
- Four rubber feet included

	Cat.	Qty 1+	Qty 4+	Qty 10+
Suits Raspberry Pi 3B	XC9006	$14.95	$13.45	$11.95

Official Raspberry Pi 4B Case

The official Raspberry Pi case suitable for the Raspberry Pi 4 Model B.

- ABS Construction
- Removable Side Panels

Note: Raspberry Pi not included

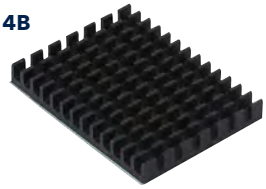
NEW

	Cat.	Qty 1+	Qty 4+
Suits Raspberry Pi 4B	XC9110	$16.95	$14.95

Heatsink for Raspberry Pi 4B

Heatsink for Raspberry Pi 4B to assist with heat dissipation to keep your Raspberry Pi cool.

- 30 x 40 x 5mm



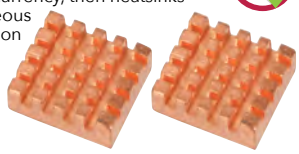
NEW

	Cat.	Qty 1+	Qty 4+	Qty 10+
Each	HH8586	$4.25	$3.80	$3.40

Copper Heatsink for Raspberry Pi 3B

If you've got your Raspberry Pi doing some intensive work like running a media player or mining cryptocurrency, then heatsinks can help to dissipate some of that extraneous heat that is generated. Can even be used on motor driver ICs or other power ICs and regulators.

- Self-adhesive pads for peel & stick use
- PGA works well for all airflows including convection only



	Cat.	Qty 1+	Qty 4+	Qty 10+
Pack of 2	HH8584	$7.95	$7.15	$6.35

Heatsink Case with Dual Fan for Raspberry Pi 4B

This precision metal heatsink case is so well made; it really needs to be marvelled at. It consists of two machined halves, one 1/2 fitted with two tiny heat extraction fans. Metal pads (part of the upper fan heatsink) are meant to touch the top of the processors to draw heat directly from them via thermal pads supplied. There is no better way to do this. The fans draw heat away from the pads. The Raspberry Pi 4B can run hot at high processing speeds and this unit is the ideal way to fix this. The Pi 4B basically clamps inside the heatsink, leaving all connections free to connect to the outside world. Basically is the same foot print of the Pi 4.

NEW

Specifications	XC9112
Dimensions	100(L) x 75(W) x 35(H)mm

	Cat.	Qty 1+	Qty 4+	Qty 10+
	XC9112	$34.95	$30.95	$27.95

DISPLAYS FOR RASPBERRY PI

TOUCHSCREENS FOR RASPBERRY PI:

Touchscreens are a great way to provide an intuitive user interface, and with the Raspberry Pi this is as easy as connecting any one of the touch screens from our range offering 2.8", 5" and 7" screens. The 2.8" and 5" Touch screens utilize Resistive Touch technology, with a pen option offering single touch operation. The 7" Touch screen utilizes advanced capacitive touch technology giving you the full multi-touch capabilities.

2.8" Touchscreen

This compact 2.8 inch screen provides 320 x 240 resolution and includes resistive touch functionality. It creates a small but functional user interface capable of displaying and controlling a Raspbian desktop. Low power requirement, powered directly from the GPIO pins. Custom image/ kernel drivers required for operation.

- Plugs straight into the top of Raspberry Pi
- 320x240 pixel
- Resistive touch

Specifications	XC9022
Screen	2.8", 320x240 Pixels, TFT
Voltage	3.3-5V

	Cat.	Qty 1+	Qty 3+
2.8"	XC9022	$29.95	$26.95

3.5" Touchscreen with Enclosure & Stylus

Perfect for prototyping or to set up a portable device with your Raspberry Pi 3B+. The 3.5" LCD touchscreen requires minimal setup. Supplied with a handy stylus and protective case. *Raspberry Pi 3B+ sold separately*

Specifications	XC4631
Screen Type	Resistive TFT
LCD Interface	SPI
Screen Controller	XPT2046
Colours	65536
Backlight	LED
Resolution	480 x 320

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4631	$49.95	$44.95	$39.95

5" Touchscreen with HDMI and USB

This 5 inch LCD screen has a resolution of 800x480. It can connect directly to a Raspberry Pi and can connect to any other HDMI source that outputs the native 800 x 480 resolution, via the built-in HDMI port. It also includes a resistive touch interface via the GPIO header. This module is designed to connect directly to the top of a Raspberry Pi, with a small HDMI double plug that locks the two together, but it can be used as a standalone display powered via the micro USB socket on the display. A backlight with switch is included. Now you can add a compact second display to your HDMI device, or make your own portable display device. Some display and driver configuration may be needed for operation.

- 5 inch with resistive touch
- 800x480 pixel
- HDMI
- Touch interface GPIO only

Specifications	XC9024
Screen	5", 800x480 Pixels
Inputs	HDMI, Resistive Touch
Supports	Raspbian for touch, video via HDMI at 800 x 480
Weight	175g
Dimensions	121(W) x 78(H)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
5"	XC9024	$99.95	$89.95	$79.95

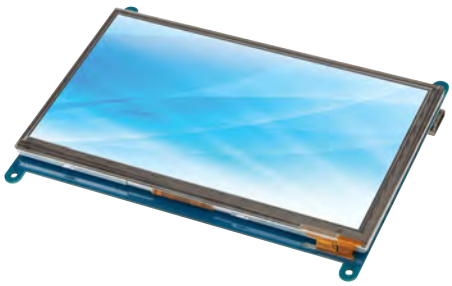
Arduino® Compatible

Raspberry Pi Compatible

7" Touchscreen with HDMI and USB

This 7 inch LCD screen has a resolution of 1024x600. It can connect directly to a Raspberry Pi as well as to any other HDMI source that supports the native 1024 x 600 resolution, via the built-in HDMI port. It also includes a capacitive touch interface. This module is designed to connect directly to the top of a Raspberry Pi, with a small HDMI double plug that locks the two together, but it can be used as a standalone display powered via the micro USB socket on the device. A back-light with switch is included. Now you can add a compact second display to your HDMI device, or make your own portable display device. Turn the Pi plus monitor combination into your own portable computer, small enough to install in a car, or even a custom 3D printed case. Some display and driver configuration may be needed for operation. This display works with Microsoft Windows® versions up to Windows® 10, and supports 5 point touch input (with the exception of Windows® XP which has single point touch).

- 7 inch
- 1024x600 resolution
- Capacitive touch screen
- Switchable backlight
- HDMI input
- Powered via one of the 2 micro USB ports. The other ports is for touch support
- Mounting tabs in each corner



Specifications	XC9026
Screen	7", 1024x600 Pixels
Inputs	HDMI, USB Capactive Touch
Supports	Raspbian, Ubuntu, Kodi, Windows 10 IOT or XP (one touch point), Windows 7, Windows 8 and Windows 10 (5 Point Touch)
Touch	Five-Point Capacitive
Weight	380g
Dimensions	165(W) x 124(H)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
7"	XC9026	$139.00	$124.95	$110.95

RASPBERRY PI

Below is th epinout diagram of the Raspberry Pi 3B & 3B+. You'll find this diagram handy if you're prototyping.

3V3 Power	1	2	5V Power
GPIO2 SDA1 I2C	3	4	5V Power
GPIO3 SCL1 I2C	5	6	Ground
GPIO4	7	8	GPIO14 UART0_TXD
Ground	9	10	GPIO15 UART0_RXD
GPIO17	11	12	GPIO18 PCM_CLK
GPIO27	13	14	Ground
GPIO22	15	16	GPIO23
3V3 Power	17	18	GPIO24
GPIO10 SPI0_MOSI	19	20	Ground
GPIO9 SPI0_MISO	21	22	GPIO25
GPIO11 SPI0_SCLK	23	24	GPIO8 SPI0_CE0_N
Ground	25	26	GPIO7 SPI0_CE1_N
ID_SD I2C ID EEPROM	27	28	ID_SC I2C ID EEPROM
GPIO5	29	30	Ground
GPIO6	31	32	GPIO12
GPIO13	33	34	Ground
GPIO19	35	36	GPIO16
GPIO26	37	38	GPIO20
Ground	39	40	GPIO21

FOR MICROCONTROLLERS
AUDIO & SOUND:

People are accustomed to communicating with sound, and it makes sense for our Arduino® to do the same thing. From generating a warning simple tone or responding to a noise through to playing back a recorded message, there are a variety of Arduino® modules and shields for making and detecting sounds.

Active Buzzer Module

Use this module to generate sound from your Arduino®; libraries are available to produce different tones and frequencies.

- Operating voltage 5VDC
- Active speaker
- 3 pin header
- Dimensions: 25(L) x 15(W) 10(H)mm

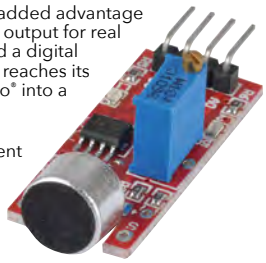
duinotech

Cat.	Qty 1+	Qty 5+	Qty 10+
XC4424	$4.95	$4.45	$3.95

Microphone Sound Sensor Module

This unit is highly sensitive with the added advantage of having two outputs. An analogue output for real time microphone voltage signal, and a digital output for when the sound intensity reaches its threshold. Great to turn your Arduino® into a voice recorder or vox.

- 5VDC operational voltage
- Sensitivity potentiometer adjustment
- Dimensions: 43(L) x 16(W) x 13(H)mm



duinotech

Cat.	Qty 1+	Qty 5+	Qty 10+
XC4438	$7.95	$7.15	$6.35

2 x 3W Amplifier Module

This remarkably small module provides a complete 2 x 3W stereo audio amplifier. Ideal for driving small speakers and earphones. Requires no external components.

- Operating Voltage: 2.5-5.5VDC
- Output Power: 2x3W @ 4ohm
- Efficiency: >90%
- Uses PAM8403 IC.
- Amplifier type: Class-D
- Dimensions: 23(W) x 16(D) x 2(H)mm

duinotech

Cat.	Qty 1+	Qty 5+	Qty 10+
XC4448	$4.95	$4.45	$3.95

Audio Amplifier Module with Speaker

An easy way to add audio effects or music to your next project. The compact board measures just 47mmm long and features a 23mm diameter speaker, 2W amplifier, and a trimpot for volume control. Powered from 5V.

Note: Before use, please adjust the sound volume to minimum to avoid damaging the speaker.

duinotech

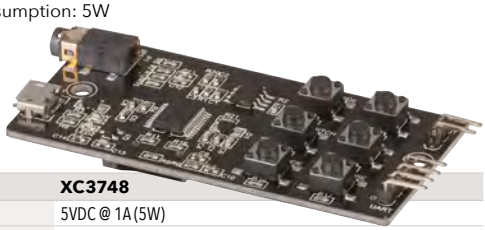
Specifications	XC3744
Power	5VDC, 500mA
Output Power	2W (0.15WRMS)
Freq. Response	800Hz - 4kHz
Sensitivity	80dB
Dimensions	47(L) x 30(W)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
XC3744	$9.95	$8.95	$7.95

MP3 Audio Player Module

This audio module can play MP3, WAV, or WMA files from an onboard microSD card (sold separately). A built-in amplifier can power an 8-ohm speaker, and a 3.5mm audio socket is also provided for private listening using your headphones or connection to an external amplifier. Control the audio using the six integrated tactile switches or via the UART serial communications interface. A micro USB interface enables you to access the microSD card and download the music.

- Max Power Consumption: 5W
- Ouptut Power: 1.2W max



Specifications	XC3748
Power	5VDC @ 1A (5W)
microSD Support	Up to 32GB
Max. Power	1.2W
Dimensions	77(L) x 33(W) x 8(H)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
XC3748	$14.95	$13.45	$11.95

Make it

Finished Project

CHRISTMAS COUNTDOWN CLOCK

This fun to build clock displays the time and date, and most importantly the number of days until Christmas. When the sound module is triggered, a voice (it might be Santa) announces the number of days and weeks until Christmas followed by a Christmas greeting, keeping everyone entertained. There is some soldering and careful assembly required to complete this project.

See step-by-step instructions at:

jaycar.com.au/christmas-clock

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Arduino® Compatible

Raspberry Pi Compatible

FOR MICROCONTROLLERS
MP3 PLAYBACK/RECORD:

Record & Playback Module

Add sound to your Arduino® without the complexity of MP3 modules and SD cards, using the ISD1820 based record and playback Module. Includes an on-board microphone and can drive a small speaker directly.

- Records up to 10 seconds
- Control playback from module buttons or digital inputs
- Works on 3.3V or 5V
- Can work in loop or single play mode
- Dimensions: 54 x 38 x 10mm

duinotech

Cat.	Qty 1+	Qty 5+	Qty 10+
XC4605	$9.95	$8.75	$7.75

Finished Project

ULTRASONIC THEREMIN PROJECT WITH ARDUINO®

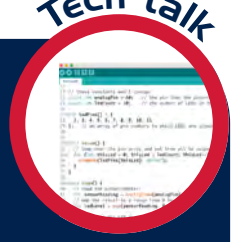
See step-by-step instructions at:

This project is ideal for the musically inclined. Just like a traditional Etherwave-Theremin, this theramin plays back samples and modulates them depending on the distance of your hand to the sensor. This simple project doesn't need many parts to get its sound because it uses a few of the special hardware features of the ATmega328P chip in the UNO to do most of the work. There is some soldering needed in this project.

jaycar.com.au/diy-ultrasonic-theremin

Tech talk

SKETCHES DEFINED



The sketch is the program that is compiled by the Arduino® IDE and uploaded to your main board. This is the software part of any Arduino® project. One of the great things about the Arduino® community is that they love to share ideas, and sketches can be found in the Arduino® IDE and in many places where users show off their projects on the internet.

FOR MICROCONTROLLERS
WI-FI/NETWORK/COMPUTER:

You might think it's a bit of a stretch to put an Arduino® in the same category as a computer, but with the right modules and shields, you can almost be on the same level. With a Wi-Fi or Ethernet connection, your Arduino® can be serving up web pages or communicating over great distances. Add a USB host shield, and connect a keyboard or mouse, and you've got an easy to use interface for your next project.

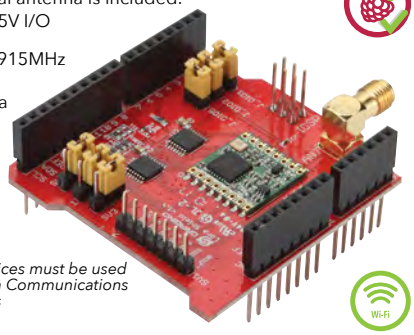
Low Cost Long Range Data Communications

LoRa™ is a powerful new technology enabling secure wireless data communications over long distances even several kilometres without the need of a mobile GSM network. LoRa™ can be used in many outdoor or indoor applications, such as building automation, weather monitoring, irrigation systems control, smart metering, smart cities, and much more. For more information about LoRa™ visit www.lora-alliance.org

LONG RANGE LORA SHIELD CAT. XC4392

The Arduino® Compatible Long Range LoRa™ shield turns your Arduino® into a LoRa™ node capable of transmitting and receiving data over long distances, even several kilometres, without the need of a GSM network. The perfect solution to your remote sensor and control projects. An external antenna is included.

- Compatible with 3.3V or 5V I/O Arduino® Board
- LoRa™ frequency Band: 915MHz
- Low power consumption
- Includes external Antenna (via I-Pex connector)



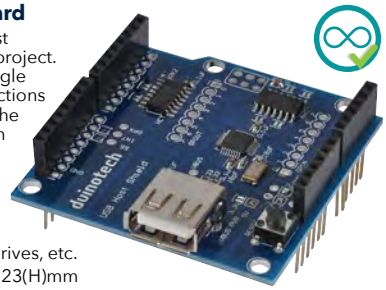
Note: Radio transmitting devices must be used in accordance with Australian Communications & Media Authority guidelines (www.acma.gov.au)

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4392	$49.95	$44.95	$39.95

USB Host Expansion Board

Brings the ubiquitous USB Host connectivity to your Arduino® project. This shield even supports Google Android® ADK allowing connections to Smartphones and Tablets. The USB port can also be used with a USB hub.

- Supports HID: keyboards, mice, joysticks, etc.
- Supports mass storage devices: USB sticks, memory card readers, external hard drives, etc.
- Dimensions: 55(W) x 54(D) x 23(H)mm



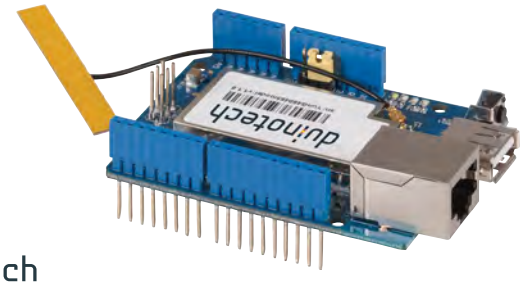
duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4456	$39.95	$35.90	$31.95

Yun Wi-Fi Shield

The Yun Shield is a complete compact Linux computer based on the Open WRT firmware which can be controlled by your Arduino® Main Board. It features Wi-Fi, ethernet, USB and Serial interfaces. Connect a 3G dongle to provide connectivity for your Arduino® on the go, or use it as a gateway for your IoT projects. Can also program an attached Arduino® board via Wi-Fi.

- Web configuration interface
- 77 x 54 x 26mm



duinotech

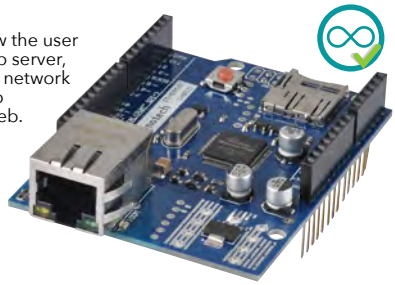
Cat.	Qty 1+	Qty 3+	Qty 6+
XC4388	$69.95	$62.95	$55.95

FOR MICROCONTROLLERS: WI-FI/NETWORK CONTINUED

Ethernet Shield

A network shield that will allow the user to set their Arduino® up as web server, control your project over your network or even allow your Arduino® to connect to the World Wide Web.

- 10/100Mb Ethernet port
- Reset button
- microSD card slot
- Stackable headers
- Dimensions: 69(L) x 48(W) x 14(H)mm



duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4412	$39.95	$35.90	$31.90

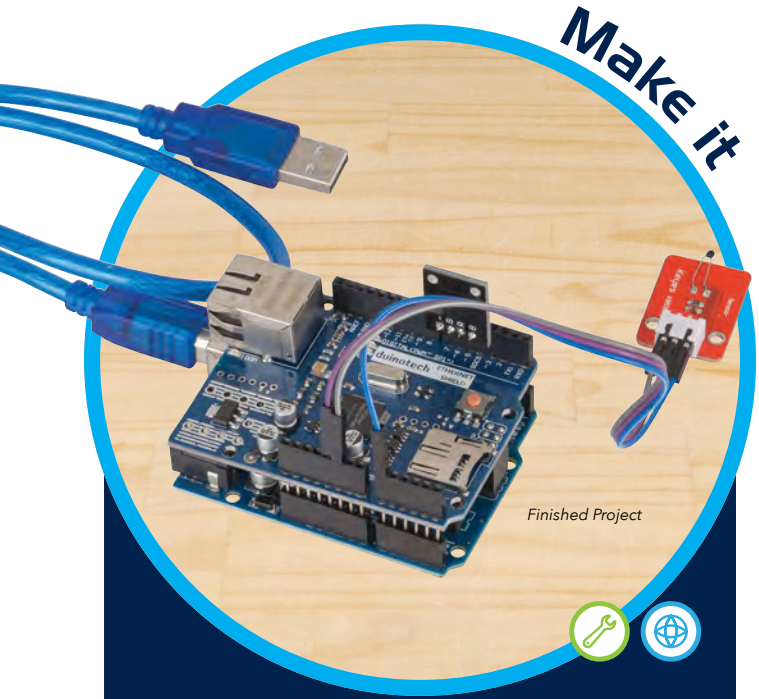
RS-232 to TTL UART Converter Module

This tiny module allows you to connect a legacy device (or computer) to your existing Arduino® board. Providing a full RS-232 port, this shield allows you to directly communicate with a huge variety of serial peripherals.

- Supports TX and RX signals
- Four pin header for 5V, GND, TX and RX signals
- Micro USB socket for optional power input
- Genuine RS-232 compatible signals on D9 socket

duinotech

Cat.	Qty 1+	Qty 4+	Qty 10+
XC3724	$9.95	$8.95	$7.95



Finished Project

ETHERNET IO CONTROLLER WITH ARDUINO®

This clever project uses our XC4412 ethernet shield to connect your Arduino® to a wired network so you can access it across the Internet. See and change the current state of the IO pins, so you can turn devices on and off remotely across the Internet. Use it to turn on the lights in another room (relay module required), see if someone has left the fridge door open (analog light or temperature sensor required), see if it's raining outside (rain sensor module required).

See step-by-step instructions at:

jaycar.com.au/diy-ethernet-controller

FOR MICROCONTROLLERS IR/RF:

We'd be pretty lost without wires connecting everything together, but sometimes it can be handy to make the connection without getting all tangled up. Check out the shields and modules below for ways to connect wirelessly. Alternatively, control an existing wireless device like the IR remote on your TV, or get data from the 433MHz transceiver on your weather station.

IR Remote Control

Forget borrowing the TV remote to add IR remote control to your next Arduino® project, and give it its own dedicated remote. Compact design with 21 buttons including numbers and channel controls. Takes a single CR2025 battery.

- NEC modulation works with 'IRremote' library
- Pocket size with numeric keypad
- Easily add IR control to your next project with XC4427

Cat.	Qty 1+	Qty 4+	Qty 10+
XC3718	$4.95	$4.45	$3.95

Infrared TX Module

Use this device to send data over infrared. Use your Arduino® to control your TV or Media Centre. Combine it with our RX module (XC4427) and you have simple wireless communication. You could also use it to control one of our infrared RC helicopters!

- Operating Voltage: 5VDC

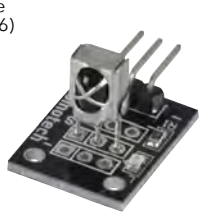
duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4426	$4.95	$4.45	$3.95

Infrared RX Module

Receive data sent via infrared, this module can read the signals sent by most IR remote controls. Pair it with the TX Module (XC4426) to make a universal remote control.

- Operating Voltage: 5VDC



duinotech

Cat.	Qty 1+	Qty 5+	Qty 10+
XC4427	$4.50	$4.05	$3.60

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Are you in the trade?

For professionals engaged in electronics & construction-related industries.

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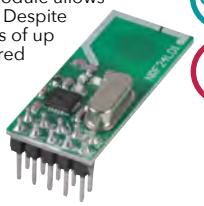
FOR MICROCONTROLLERS: IR/RF CONTINUED

2.4GHz RF Module



Based on the NRF24L01 transceiver IC, this module allows communication on the license free ISM band. Despite its diminutive size, it supports on-air data rates of up to 2Mbps. No external components are required (other than your Arduino®).

- Operating Voltage: 3.3V (5V tolerant logic)
- Output Power: 1mW
- Chipset: NRF24L01
- Ultra low power consumption
- Protocol: SPI
- Dimensions: 33(L) x 14(W) x 9(H)mm

duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4508	$9.95	$8.75	$7.75

433MHz Wireless Modules

Pre-built 433MHz wireless transmitter / receiver modules featuring ASK encoding and are ideal for devices using short data bursts such as remote controls, trigger pulses etc.

Specifications	ZW3100	ZW3102
Output Power	3dBm.	
Supply Voltage	3VDC	5VDC
Supply Current	10mA max	
Data Rate	300bps to 10kbps	
PCB Measures (excl pins)	18.5(H) x 14.5(W)mm	42(H) x 11(W)mm

	Cat.	Qty 1+	Qty 10+	Qty 25+
Transmitter	ZW3100	$13.95	$12.35	$10.95
Receiver	ZW3102	$14.95	$13.45	$11.95

RF Transceiver Module

This module adds a versatile 433MHz radio to your duinotech project. Capable of transmitting and receiving over a wide frequency range, these modules allow two-way wireless communication between duinotechs. Controlled via SPI. Prewritten libraries available.

- Operating Voltage: 1.9-3.6VDC
- Frequency Range 433/898/915MHz
- Maximum Data Rate: 50kbps (with error correction)
- RF output power: 13dBm(20mW)
- Connection protocol: SPI
- Includes antenna
- Dimensions: 32(W) x 19(L) x 19(H)mm (Excluding antenna)

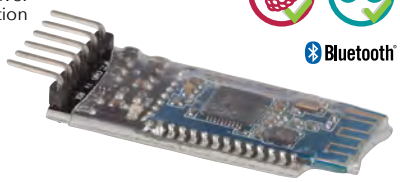
duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4522	$19.95	$17.95	$15.95

FOR MICROCONTROLLERS BLUETOOTH®:

Bluetooth® technology is in many things around us, such as computers and mobiles phones. Allowing Arduino® to communicate with these devices via Bluetooth® can expand their functionality. From simple display of debugging data on your laptop to full control of your Arduino® robot with an app, Bluetooth® can provide the connectivity you need.

Bluetooth® V4.0 BLE



Configurable as master or slave. Provides a serial communication channel.

- State status pin
- Serial interface with AT commands
- 5V IO and power

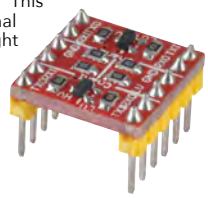
duinotech

Cat.	Qty 1+	Qty 4+	Qty 10+
XC4382	$29.95	$26.95	$23.95

FOR MICROCONTROLLERS POWER/VOLTAGE CONVERSION:

Getting power to your Arduino® project is fairly important, and will probably need extra components if you want to take what you're building beyond the reach of the USB cable on your computer. From charging batteries to converting between systems running off different voltages or even getting power to your breadboard, you'll find something to help amongst the modules below.

Logic Level Converter Module



While most of the modules used in the Arduino® world are 5V logic, some are 3.3V. And unfortunately, connecting them directly often results in "letting out the smoke!" This little module is the answer. Provides two bi-directional channels to safely marry 3.3V with 5.0V. Drops straight into solder-less breadboard or can be soldered into your own PCBs.

- Two bi-directional channels
- 12-pin DIL package
- Dimensions: 35(W) x 31(D) x 21(H)mm

duinotech

Cat.	Qty 1+	Qty 5+
XC4486	$4.95	$4.45

Lithium Battery Charge Module

This tiny module charges a single lithium cell from a 5V supply. Ideally paired with XC4512 DC-to-DC Converter Module to create a device that runs on a single lithium cell and recharges by USB. Output via solder tabs, Input is either via solder tabs or a mini-USB port.

- Input voltage 4.5V-5.5VDC
- Default charge rate: 1A
- Full charge voltage 4.2V
- Charge state LEDs
- Dimensions: 27(L) x 19(W) x 5(H)mm

duinotech *Note: Batteries not included.*

Cat.	Qty 1+	Qty 5+
XC4502	$4.95	$4.45

5VDC Boost Module

This module is capable of providing a stable 5V, from a single Li-Po or two Alkaline cells. Input is via two solder pads, output is via a female USB socket.

- Input Voltage Range: 2.5-5VDC
- Output Voltage: 5VDC
- Dimensions: 34(L) x 16(W) x 8(H)mm

Note: Batteries not included.

duinotech

Cat.	Qty 1+	Qty 5+
XC4512	$4.95	$4.45

DC - DC Stepdown Module

This module accepts any voltage from 4.5 - 35VDC, and outputs any lower voltage from 3-34V. Output is adjusted via a multi-turn potentiometer. Use it to run your 5V duinotech projects from a 6V, 9V or even 12V supply.

- Input voltage: 4.5 - 35VDC
- Output voltage: 4 - 34VDC adjustable
- Maximum output current: 2.5A
- Dimensions: 49(L) x 26(W) x 12(H)mm

duinotech

Cat.	Qty 1+	Qty 5+
XC4514	$7.95	$7.15

DC-DC Boost Module with Display

The Arduino® compatible boost module can be used to provide higher voltages for your project, such as running 5V Arduino® projects from Lithium batteries.

- Output from 5V-56V
- Input range 3.5V-35V
- Max 2A input current without heatsinking
- Solder terminals
- Cannot be used to reduce voltage
- Dimensions: 66 x 35 x 12mm

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Cat.	Qty 1+	Qty 5+	Qty 10+
XC4609	$19.95	$17.95	$15.95

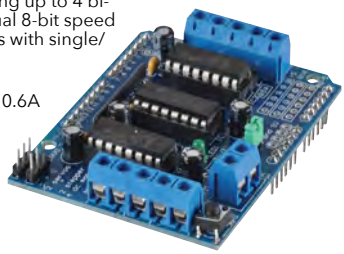
FOR MICROCONTROLLERS
MOTOR/POWER CONTROL:

Practically all motors use more power than any of the pins on Arduino® Main Board can supply, so we need to use a Motor Control Shield or Module to interface. Most motors also operate off a voltage different to 5V, and many of these Shields and Modules will provide regulation of higher input voltages down to 5V for your Arduino® main board as well. Of course, these boards aren't limited to just driving motors, they are suitable for many power control applications.

L293D Motor Control Shield

This versatile board has 2 x 5V servo ports connected to the Arduino® high-resolution dedicated timer to ensure jitter-free operation. It is also capable of driving up to 4 bi-directional DC motors with individual 8-bit speed selection, or up to 2 stepper motors with single/two/interleaved steppings.

- 5V to 16VDC
- 4 H-Bridges: per bridge provides 0.6A (1.2A peak current) with thermal protection
- 2 external terminal power interface
- Dimensions: 70(L) x 53(W) x 20(H)mm



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Cat.	Qty 1+	Qty 5+
XC4472	$12.95	$11.35

24V 5A MOS Driver Module

When connected to an Arduino®, this impressive MOS driver module accepts Pulse Width Modulated (PWM) input to drive 24VDC loads. Compatible with both Arduino® and pcDuino®, making it perfect for many projects such as lighting, DC motors, pumps and solenoid.

- 3.3V & 5V DC operation
- Output load voltage 0-24VDC
- Output current 5A
- Dimensions: 34(L) x 21(W) x 16(H)mm

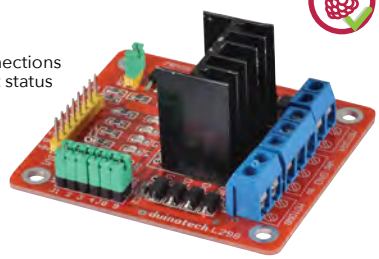
duinotech

Cat.	Qty 1+	Qty 5+
XC4488	$7.95	$7.15

Dual Motor Controller Module

Using the powerful L298N Dual Motor Driver, this module allows full control of two DC Motors or one stepper-motor. Features back-EMF and over-temperature protection, it is ideally suited to drive two-motor robot kits. An on-board 5V regulator can also be used to power your project.

- Maximum output current: 4A
- Motor voltage: 3-30VDC
- Screw terminals for easy connections
- LEDs show power and output status
- Requires six digital pins
- 4 mounting holes
- Dimensions: 69(W) x 56(D) x 36(H)mm



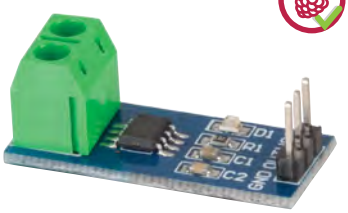
duinotech

Cat.	Qty 1+	Qty 5+
XC4492	$14.95	$13.45

30A Current Sensor Module

Monitor the motors on your next robot project with the 30A Current Sensor Module. The module outputs a voltage proportional to current passing through the sense pins on the module. Based on the ACS712 sensor IC.

- Output ratio is 66mV/A
- Can measure negative and positive current flows
- Onboard power indicator
- 5V supply required
- Current path is isolated from logic pins
- Dimensions: 31(L) x 13(W) x 15(H)mm



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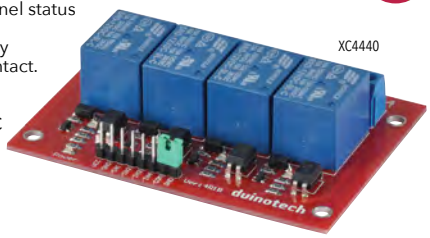
Cat.	Qty 1+	Qty 5+	Qty 10+
XC4610	$11.95	$10.45	$9.45

Relay Boards

These handy relay modules provide the easiest way to use your duinotech to switch real world devices. Available in one, four and eight channel versions, these modules can switch up to 10A per channel. Includes back-EMF protection and LEDs so you can easily see the state of the outputs. The four and eight channel versions even have optical isolation to protect your duinotech. While the one channel version operates directly from 5V.

- Status LEDs show channel status
- Active High logic
- Screw terminals for easy connection to relay contact.
- SPDT Relays
- Current Ratings: 10A @ 250VAC, 10A @ 30VDC
- Four mounting holes on each module



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Cat.	Channels	Supply Voltage	Optical Isolation	Dimensions
XC4419	1	5VDC	No	40(W) x 27(D) x 18(H)mm
XC4440	4	12VDC	Yes	77(W) x 55(D) x 17(H)mm
XC4418	8	12VDC	Yes	135(W) x 50(D) x 19(H)mm

Channels	Voltage	Cat.	Qty 1+	Qty 5+	
1	5VDC	XC4419	$5.45	$4.90	
4	12VDC	XC4440	$12.95	$11.35	
Channels	**Voltage**	**Cat.**	**Qty 1+**	**Qty 3+**	**Qty 6+**
8	12VDC	XC4418	$19.95	$17.95	$15.95

Duinotech Smart Wi-Fi Relay Kit

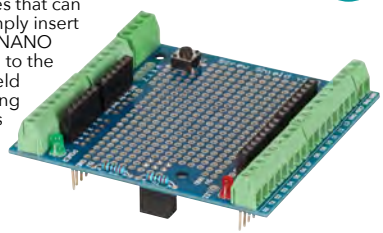
This board is essentially a Wi-Fi controlled relay that you can trigger with an App from anywhere in the world. Ideal for home automation, IoT, lighting control projects, and much more. The board measures just 45 x 28mm and features an ESP8266 module and microcontroller, screw terminal blocks to make wiring easy, and a 5V relay to control power to devices that draw more current than an ordinary development board can handle.

duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC3804	$17.95	$15.95	$13.95

Duinotech Screw Terminal Shield

This shield makes it easy to create prototypes or complete projects using an Arduino® NANO or equivalent, without the need for soldering or using jumper wires that can become loose and fall out. Simply insert the shield onto your favourite NANO board then connect any wiring to the screw terminal blocks. The shield also includes a large prototyping area with through-plated holes if you need to solder sensors and other components.



duinotech

	Cat.	Qty 1+	Qty 3+	Qty 6+
Suits Arduino® UNO	XC3890	$15.95	$13.95	$12.45
Suits Arduino® NANO	XC3892	$9.95	$8.95	$7.95

Tech talk

WHAT IS A SHIELD?

A word that you will hear a lot on these pages is SHIELD. For the purposes of Arduino, a shield is not a thing to protect you in a swordfight, it's a description for a device that will go with another Arduino® device. It could be a temperature sensor, a music generator, or even a Wi-Fi adaptor, etc. Sometimes the word "Module" is used as well. Both terms have an interchangeability about them.

FOR MICROCONTROLLERS
INPUT & CONTROL:

With any Arduino® project, there'll be a point where you need to provide some input to tell it what to do. From steering a robot in real-time to changing a setting occasionally, there's a shield or module that will help you control your sketch.

240x320 LCD Touchscreen

A large, colourful touch display shield which piggy-backs straight onto your UNO or MEGA. Display photos from the microSD card slot on the display to create a slick and professional-looking project.

- 320x240 pixel resolution
- Fast Parallel interface
- microSD Card slot
- Resistive touch interface
- Dimensions: 77(L) x 52(W) x 19(H)mm

duinotech

Cat.	Qty 1+	Qty 4+	Qty 10+
XC4630	$29.95	$26.95	$23.95

16 Key Touch Keypad Module

A compact 16 key touch interface for your Arduino® project, based on the TTP229 capacitive touch sensor IC. Use the module as it is, or extend wires from the pads to create external touch pads.

- Works on 2.4-5.5V
- Onboard power indicator
- Two wire serial data interface
- Dimensions: 65 x 50 x 12mm

duinotech

Cat.	Qty 1+	Qty 5+	Qty 10+
XC4602	$9.95	$8.75	$7.75

Touch Shield

The MPR121 IC is a great way to build simple capacitive touch interfaces, and now it's even easier to incorporate into your Arduino® projects with the touch shield. The touch shield has 9 capacitive touch pads, with headers for the remaining 3 electrode connections. With this shield you can have a total of 12 touch sensitive buttons. An on-board logic level converter allows it to work with 5V and 3.3V Arduino® boards Simply solder on some header pins and stack it on to your Arduino® for a convenient input device.

duinotech

Cat.	Qty 1+
XC4551	$19.95

Fingerprint Sensor Module

Runs off 3.3V and TTL serial to send data back and forth between the mainboard and fingerprint sensor.

To help you get up and running quickly you can download the Arduino® library we have written at: https://github.com/Jaycar-Electronics/Fingerprint-Sensor

Cat.	Qty 1+	Qty 4+	Qty 10+
XC4636	$49.95	$44.95	$39.95

Keypad Shield with LCD

Comes with a built-in 16 character by 2 line LCD display with backlight, this six push button keypad allows you to create a user friendly interface for your project. The keypad consists of up, down, left, right, select and also a reset button. Perfect to use as a selection menu.

- 16 Chars x 2 lines (32 Chars)
- Contrast adjust knob
- LED Backlight
- 4 Bit Arduino® LCD Library
- Dimensions: 80(W) x 58(D) x 20(H)mm

duinotech

Cat.	Qty 1+	Qty 4+	Qty 10+
XC4454	$19.95	$17.95	$15.95

Thin-Film Pressure Sensor

A highly sensitive waterproof sensor to detect pressure. The 5mm round thin sensor is mounted at the end of a 40mm long flexible lead that connects to the main board. Pressure up to 10kg on the sensor sends the change in resistance to your favourite microcontroller. Powered from either 3.3V or 5V.

- Flexible nano sensor
- Waterproof
- Pressure sensitive

Specifications	XC3738
Range	0-10kg
Thickness	<0.25mm
Response Point	<20g
Voltage required	3.3V - 5V
Lead Length	40mm
Board Dimensions	35(L) x 20(W)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
XC3738	$11.95	$10.45	$9.45

Heart Rate Sensor Module Kit

Make your own health and fitness monitoring project with this heart rate monitor sensor kit. The compact board measures the electrical activity of the heart via three ECG electrode sensors, then filters and amplifies the analogue signals so that the heartbeat can be charted as an ECG or electrocardiogram using your Arduino® or similar microcontroller. Powered by 3.3V. Kit includes the heartbeat sensor board, 3 x adhesive ECG pads and a colour-coded connecting cable. A 12-pack of spare adhesive ECG pads are available separately (XC3785).

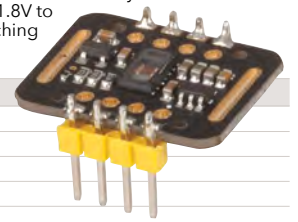
- Leads Off Detection
- Auto Shutdown Pin
- AD8232 Heart Monitor Board
- LED Onboard Flashes with Heart Beat

duinotech

	Cat.	Qty 1+	Qty 3+	Qty 6+
Module Kit	XC3784	$27.95	$24.95	$21.95
ECG Sensor Pad 12Pk	XC3785	$8.95	$8.05	$7.15

Heartbeat Sensor Module

An easy way to provide pulse rate measurements from a person's finger, earlobe or wrist to your electronics project. At the heart of the board is the MAX30102 IC, which is an integrated pulse oximeter and heart rate monitor sensor. Data from this sensor is communicated to your microcontroller using standard I2C communications. Other features include ambient light suppression and low-noise circuitry for optimum performance. The tiny board measures just 20 x 15mm, and runs from 1.8V to 5V (optional 1.8V or 3.3V IIC voltage switching onboard).



Specifications	XC3740
LED Peak Wavelength	660nm/880nm
Power	3.3V - 5VDC
Output Signal Interface	I2C
Dimensions	20(L) x 15(W)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
XC3740	$9.95	$8.95	$7.95

Hand Gesture Sensor Module

Control your project with touchless hand gestures. Onboard ambient light, RGB colour, and proximity sensors detect the hand movements in six different directions, then sends the data to your microcontroller over standard I2C communications. It has a detection range between 100 - 200mm, and uses UV and IR blocking filters to improve performance.

- Ambient Light & RGB Colour Sensing
- Proximity Sensing
- Gesture Detection

Specifications	XC3742
Detection Range	100 - 200mm
Power	3.3VDC
Output Signal Interface	I2C
Dimensions	20(W) x 12(H) x 11(D)mm

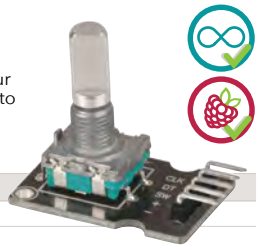
Cat.	Qty 1+	Qty 3+	Qty 6+
XC3742	$19.95	$17.95	$15.95

FOR MICROCONTROLLERS: INPUT & CONTROL CONTINUED

Analogue Rotation Sensor

An analogue rotary encoder module that provides direction and number of turns to your microcontroller. Voltage can be subdivided into 1024.

- Analogue Interface



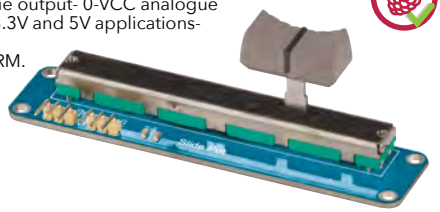
Specifications	XC3736
Voltage Required	2.4V - 5.5V
Dimensions	65(L) x 50(W)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
XC3736	$5.95	$5.35	$4.75

10K Ohm Slider Potentiometer Module

An easy-to-install slide potentiometer for your Arduino, ARM, or microcontroller project. Suits 3.3V and 5V systems, and features a dual analogue output that travels between 0V to VCC. High-quality for reliable and stable performance. Supplied with a yellow knob. Features:- Dual analogue output- 0-VCC analogue voltage signal output- 3.3V and 5V applications- Suitable for Arduino®, Microcontrollers and ARM.

- Dimensions: 90(L) x 27(W) x 30(H)mm



Cat.	Qty 1+	Qty 4+	Qty 10+
XC3734	$9.95	$8.95	$7.95

XY Joystick Module

This handy module gives you X & Y axis control for your Arduino® project. The board is interfaced through 5 pin header and provides a small game-pad style joystick. There is also a tactile switch when you push the stick down.

- Operating Voltage: 3-5VDC
- Digital output for tactile switch
- X & Y axis analog outputs
- Dimensions: 47(L) x 25(W) x 32(H)mm

duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4422	$5.95	$5.35	$4.75

LED Pushbutton Module for Arduino®

A simple pushbutton module with a green LED, ideal for adding an input to a breadboard design or other project.

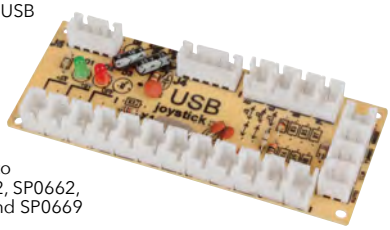
- Tactile Pushbutton and Green LED
- LED lights up when button pressed (can be changed with jumpers/ wiring)
- 5V and 3.3V compatible

Cat.	Qty 1+	Qty 5+
XC3722	$9.95	$8.95

USB Interface for Joystick and Buttons

If you're building your own arcade game, whether it's with a PC or Raspberry Pi, you'll need a joystick. This interface board allows you to easily interface joysticks like our SM1052 and arcade pushbuttons like SP0662, SP0664, SP0665, SP0666 and SP0669 into any device that can connect to a USB joystick. It could be used for arcade games, flight simulators or anything that works with a USB joystick.

- Up/Down/Left/Right inputs
- 12 button inputs
- Detachable USB lead for fitting through small holes
- Includes 10 pluggable leads that connect directly to spade terminals on SM1052, SP0662, SP0664, SP0665, SP0666 and SP0669

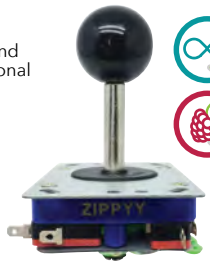


Cat.	Qty 1+	Qty 4+	Qty 10+
XC9046	$19.95	$17.95	$15.95

Arcade Joystick with Microswitches

Solidly built joystick is ideal for arcade games and emulators or anything that needs digital directional controls.

- SPST Microswitches for reliable operation
- Adjustable restrictor plate with options for 2 way, 4 way and 8 way
- Metal mounting plate and main shaft
- Removable knob for easy mounting



Cat.	Qty 1+	Qty 10+	Qty 25+
SM1052	$24.95	$22.45	$19.95

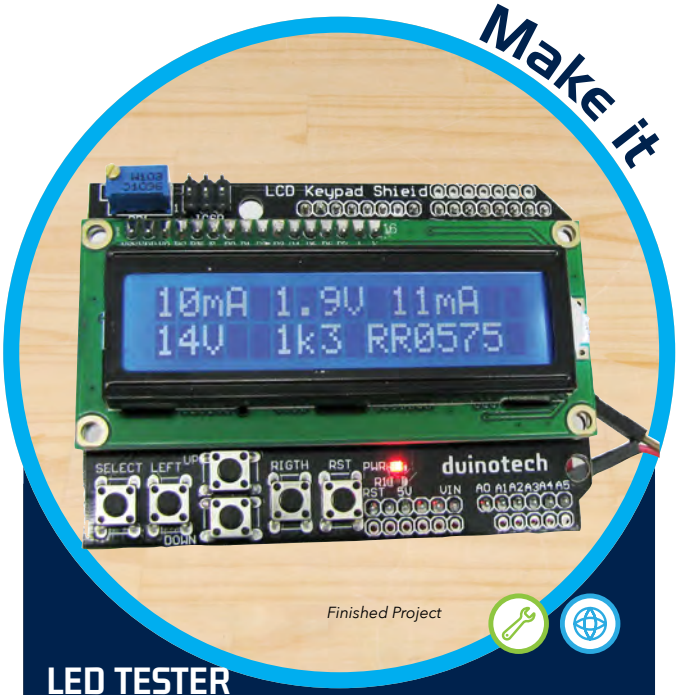
Illuminated Arcade Button

Brightly coloured illuminated pushbutton switches ideal for creating a custom arcade machine, or even use as a large illuminated pushbutton for a control panel. Suits 25mm mounting hole.

- SPDT Microswitch for reliable operation
- All connections are 6.3mm spade
- Includes LED illumination suitable for 12V

	Cat.	Qty 1+	Qty 10+	Qty 25+
Red	SP0662	$9.95	$8.95	$7.95
Yellow	SP0664	$9.95	$8.95	$7.95
Green	SP0665	$9.95	$8.95	$7.95
Blue	SP0666	$9.95	$8.95	$7.95
White	SP0669	$9.95	$8.95	$7.95

Make it



Finished Project

LED TESTER WITH ARDUINO®

A handy little tool that can help you out if you work with LEDs, especially if you are always trying to work out the right resistor to make them work. The idea has been inspired by Dave Cook's model at http://robotroom.com/LED-Tester-Pro-1.html

We have written the code from scratch to suit the parts we have available in the duinotech range.

- **Adjustable test current**
- **Displays LED Forward Operating voltage**
- **Calculates ideal resistor & gives Cat. number for a design voltage and current**
- **Only 3 discrete components to be soldered**
- **Detachable shields - pull it apart & use for other projects**

See step-by-step instructions at:

jaycar.com.au/diy-arduino-led-tester

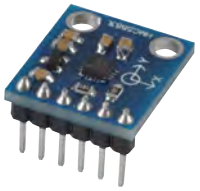
FOR MICROCONTROLLERS
COMPASS/ORIENTATION/GPS:

We pretty much take for granted many of the sensors that are on our phones these days- compass, GPS, accelerometer, but did you know that you can also add similar features to your Arduino® projects? You could use a compass sensor to help guide your robot or an accelerometer to keep your Arduino® controlled gimbal facing upright, or even provide a tilt-based user input device for next project.

3 Axis Digital Compass Module

This module allows you to take accurate compass bearings, no matter how it is orientated. Easily interfaced via I2C.

- Operating Voltage: 5VDC
- Resolution: 12bits
- Interface: I2C
- Includes 5V - 3V level shifter
- Dimensions: 20(L) x 16(H) x 5(H)mm



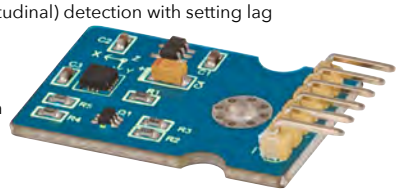
duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4496	$17.95	$15.95	$13.95

Tri-Axis Digital Tilt Sensor

Use this high performance acceleration sensor in your project to detect direction (transverse/longitudinal), as well as free fall, pulse, and shake detection. The on-board MMA8452Q is a smart low-power, three-axis, capacitive micromachine acceleration sensor with 12-bit resolution. Users are able to set a range of ±2g, ±4g, or ±8g, which can output high-pass filtering data and non-filtered data in real-time. An embedded function can also be used to generate an inertial wake-up interrupt signal, which enables MMA8452Q to maintain a low-power mode in the static state while monitoring the event.

- 12 bit and 8 bit digital outputs
- I2C digital output interface (up to 2.25MHz with 4.7kΩ pull-up resistor)
- Two programmable interruption pins applied to six interruption sources
- Three motion detection embedded channels: free fall detection, pulse detection, shaking detection
- Direction (transverse/longitudinal) detection with setting lag compensation
- Automatic arousal and auto-dormant ODR can be automatically altered
- High-pass filtering data can be exported in real time
- Dimensions: 35(L) x 20(W) x 7(H)mm



Cat.	Qty 1+	Qty 3+	Qty 6+
XC3732	$9.95	$8.95	$7.95

Duinotech GPS Receiver Module with On-Board Antenna

Add GPS positioning down to a 2.5m accuracy to your next project with this compact GPS module. Based on the NEO-7M that supports the NMEA standard protocol output, and features built-in flash to save settings after power-off, without an external EEPROM. An onboard ceramic antenna means you don't need an external one, however, an SMA connector is also attached if you wish to attach your own antenna to improve reception. The micro USB interface enables you to debug the GPS module via a data cable, and a reserved serial port interface for USB-to-serial port modules or external MCU enables you to easily receive the GPS data.

- On-board signal LED indicator
- 3.3V or 5V operation
- Onboard & external antenna options
- 9600 Baud Rate
- 1Hz Output Frequency
- Dimensions: 53(L) x 26(W) x 15(H)mm

Please note: When connecting an external antenna the C2 capacitor on the module needs to be removed. If the internal and external antennas are used together they will interfere with each other, affecting positioning.

duinotech

Cat.	Qty 1+
XC3710	$24.95

compatability icons

Arduino® Compatible

Raspberry Pi Compatible

FOR MICROCONTROLLERS
NFC & RFID:

RFID technology is one of those things that is everywhere around us, including security systems, bank cards, public transport cards and even passports. Using a RFID module or shield you can read (and write to, depending on how secure they are) RFID cards and interact with NFC enabled items like mobile phones.

Data Logging Shield

Extremely easy to set up. Use this datalogging shield to store your data to files on any FAT16 or FAT32 formatted SD card, or have it to be read by any plotting, spreadsheet or analysis program. All data stored is timestamped in real-time so you know precisely what happened when! Uses a 3.3V converter to avoid damaging your SD card. Includes a 3V button battery.

- Stackable headers
- Reset button
- Changeable CR1220 battery
- 102 solder pads
- Dimensions: 43(L) x 17(W) x 9(H)mm

duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4536	$19.95	$17.95	$15.95

RFID Read & Write Kit

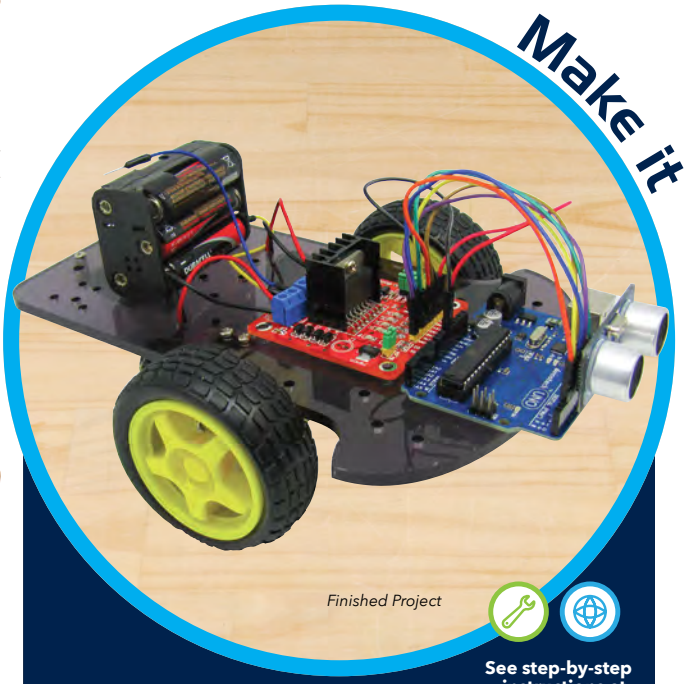
This RFID module allows you to both read and write MiFare-Type RFID cards. Create your own contactless security lock. Includes one credit-card style tags and one key-fob style tag.

- Operating Voltage: 3.3V
- Communications Protocol: SPI
- RFID Protocol: MiFare
- Includes 1 x card and 1 x fob
- Dimensions: 66(L) x 40(W) x 7(H)mm

duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4506	$19.95	$17.95	$15.95

Make it



Finished Project

See step-by-step instructions at:

WALL DODGING ROBOT

This little robot is fitted with an ultrasonic sensor, which it uses to help navigate its surroundings. When it detects an object in front of it, it backs up, turns a little and then continues on its way.

jaycar.com.au/diy-dodging-robot

FOR MICROCONTROLLERS
CLOCK & TIMING:

If you have a project that needs to keep time, even when your Arduino® is powered down, then check out these modules and shields. Sporting a 'Real Time Clock', they have a small battery backed IC which keeps track of the seconds, minutes, hours, days and even years. Operation times of a year can be expected – even longer if the project has external power.

Real Time Clock (RTC) Module

This tiny little module will keep accurate time using the supplied CR2032 button battery. Great to use with all of your Arduino® projects that require the use of the date and time such as clocks, data-loggers and timers.

- Using a 24C32 32k EEPROM
- Supplied with a CR2032 battery
- Read and write functionality
- Usage time approx. 1 year fully charged
- Dimensions: 28(L) x 28(W) x 7(H)mm

duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4450	$5.95	$5.35	$4.75

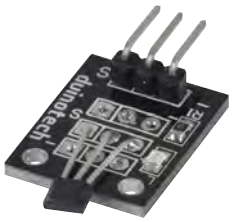
FOR MICROCONTROLLERS
MAGNETIC HALL EFFECT:

You'd be surprised at how useful a magnetic sensor can be, especially if you want to sense something without touching it. The duinotech range of magnetic sensors spans simple proximity sensors to detect the presence of a magnet to three dimensional compass sensors for detecting magnetic field directions and strength.

Hall Effect Sensor Module

Sense magnetic presence, rotating wheels and magnets, door sensors and any other magnets near this device.

- Output turns on at 30Gauss(3mT) and off at 10Gauss(1mT)
- Operating Voltage: 4.5 - 28VDC
- Schmitt-Trigger output
- Dimensions: 20(W) x 15(L) x 3(H)mm



duinotech

Cat.	Qty 1+	Qty 5+
XC4434	$4.95	$4.45

Hall Effect Sensor

UGN3503U Hall Effect Sensor IC

A miniature sensor to accurately track extremely small changes in magnetic flux density - changes generally too small to operate Hall effect switches. Applications include notch sensor, current monitor, gear tooth sensor, etc.

Specifications	ZD1902
Operating Voltage	4.5 - 6VDC
Supply Current	Typ. 9mA
Output Voltage	Typ. 2.5V DC
Output Resistance	50Ω
Size	4.5(W) x 4.5(H) x 1.5(D)mm

Cat.	Qty 1+	Qty 10+	Qty 25+
ZD1902	$7.75	$6.90	$6.15

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FOR MICROCONTROLLERS
MATRIX DISPLAY & CONTROL:

Matrix displays offer a cost effective way of creating large signage. The matrix display modules can be combined into multiple rows and columns to create a display as large as you need. Choose from the large range of monochrome or colour matrix display modules, microcontroller driven drivers, and any one of the Arduino® microcontroller boards and you can create an impressive scrolling text and image display board.

8 x 8 LED Dot Matrix Module

A 64 x red LED matrix, this module is easily controlled with the LED Control library. Display your own custom characters, or use multiple modules together to make a scrolling display.

- Operating Voltage: 5VDC
- Protocol: SPI
- Chipset: MAX7219
- LED Colour: RED
- Dimensions: 62(W) x 32(H) x 14(D)mm

duinotech

Cat.	Qty 1+	Qty 5+
XC4499	$7.95	$7.15

RGB LED Circular Board

Add dazzling circular-shaped LED patterns to your next project or costume with this addressable RGB LED ring module. It measures 72mm in diameter and features 24 x RGB LEDs with 256 brightness levels. Runs from 5V, features reverse polarity protection, and has onboard WS2812 circuitry that allows you to control it with just one data input. A data output enables you to easily cascade multiple displays.

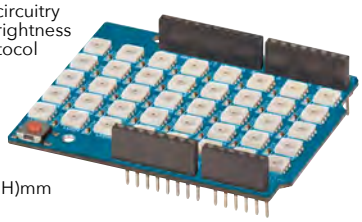
Specifications	XC4385
Power	5V
Brightness Levels	256
Colours	16,777,216
Dimensions	72mm Dia.

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4385	$17.95	$15.95	$13.95

8 x 5 RGB LED Shield

Create dazzling LED displays with this RGB LED Matrix Shield that simply plugs directly onto your UNO compatible board. The built-in driver IC and 12V programmable constant current circuitry ensure each LED can reach full brightness and colour. The data transfer protocol uses single NZR communication mode. After the pixel power-on reset, the DI port receives data from controller. The first pixel collects initial 24-bit data then sends it to the internal data latch.

- Dimensions: 69(L) x 57(W) x 18(H)mm



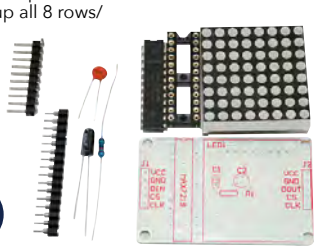
Cat.	Qty 1+	Qty 3+	Qty 6+
XC3730	$19.95	$17.95	$15.95

LED Matrix Kit

This 8x8 LED matrix kit is powered by MAX7219 and it only needs 3 data lines and 2 power lines. It is easy to use and has adjustable brightness. Usually used as electronic display panel. Can be driven in parallel or serial and takes less than 0.1s to light up all 8 rows/columns so a dynamic display can be achieved in either connection.

Includes:

- Chipset: MAX7219
- Electrolytic capacitor: 10μF/25V
- Resistor: 10K
- Capacitance: 0.1μF
- Headers and receptacles
- LED Matrix dimensions: 52(L) x 34(W)mm



duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4592	$24.95	$22.45	$19.95

8x16 Matrix LED Display Module

Create amazing patterns or messages with this LED matrix module. It features 128 bright blue LEDs arranged in an 8 x 16 grid, brightness control, and communicates to your microcontroller via I2C. It can be powered from 3.3V or 5V, and connects to your controller board using the supplied 220mm long 4-pin cable.

Specifications	XC3746
Power	3.3V - 5VDC, 400mW
LEDs	128 (8 Vertical x 16 Horizontal)
LED Pitch	8(H) x 4(W)mm
Communication	I2C
Oscillation Frequency	450kHz
Dimensions	72(L) x 32(W) x 8(D)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
XC3746	$19.95	$17.95	$15.95

84 x 48 Dot Matrix LCD Display Module

These compact LCD displays are identical to those found in some old Nokia phones, and feature the PCD8544 chipset. An easy way to add a small black and white graphics display to your project.

- 8 pin plug
- SPI interface
- Four mounting holes
- Can work off 3.3V or 5V supply
- Needs 10k resistors for IO pins if running off 5V
- Dimensions: 44(L) x 44(W) x 13(H)mm

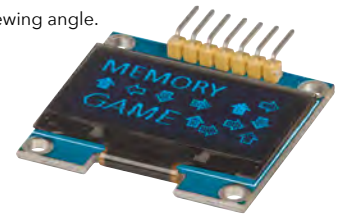
duinotech

Cat.	Qty 1+	Qty 5+	Qty 10+
XC4616	$19.95	$17.95	$15.95

1.3" 128 X 64 Pixel Monochrome OLED Display Module

A thin 128 x 64 pixel OLED display. Monochrome graphics with wide viewing angle.

- IIC/SPI
- 100 Lux @ 12VDC
- Dimensions: 39(L) x 36(W)mm



Cat.	Qty 1+	Qty 3+	Qty 6+
XC3728	$19.95	$17.95	$15.95

128 x 128 Pixel OLED Display Module

This 1.5" OLED display features 128 x 128 RGB pixels to provide an attractive colour display for your next project.

- RGB 128 x 128 pixels
- SSD1351 chipset
- Passive Matrix Display
- 262,144 Colours
- 1/128 Drive Duty
- 5V Powered
- Dimensions: 34(L) x 26.8(W) x 2(D)mm

Cat.	Qty 1+
XC3726	$39.95

compatability icons

Arduino® Compatible

Raspberry Pi Compatible

1.54" E-Ink Display Module

This highly visible display module uses E-ink technology to display black, white, and red text and graphics on the 200 x 200 pixel screen. The screen uses very little power to refresh, and retains the last displayed content for a very long time when power is removed. The screen also reflects ambient light, which avoids the need for a backlight, and makes it easy to read under bright sunlight. It has a wide viewing angle over 170°, works from 3.3V, and communicates with your favourite microcontroller using its SPI interface.

Specifications	XC3747
Power	3.3VDC
Resolution	200 x 200
Viewing Angle	170°
Partial Refresh Time	0.3s
Full Refresh Time	2s
Low Refresh Power	26.4mW
Extra Low Standby	<0.017mW
Dimensions	48(L) x 33(W)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
XC3747	$49.95	$44.95	$39.95

128 x 64 Dot Matrix LCD Display Module

A larger display than XC4616 with cool blue graphics on white background. Similar to the character LCDs with inbuilt character ROM, but the flexibility to show graphics as well.

- 5V supply
- 128 pixels wide by 64 pixels high display
- 8 bit, 4bit and serial interfaces available
- White backlight
- Dimensions: 93(L) x 70(W) x 13(H)mm

duinotech

Cat.	Qty 1+	Qty 5+	Qty 10+
XC4617	$29.95	$26.95	$23.95

Make it

Finished Project

LCD ARDUINO® CLOCK

This is an easy project to assemble- just one main board and two shields, but gives a fully functional, easy to read clock display which retains the time, even when disconnected from power. You could leave it on your desk plugged into a USB port on your computer, so that it powers up whenever the computer is on.

See step-by-step instructions at:

jaycar.com.au/diy-arduino-clock-uno

FOR MICROCONTROLLERS
DISPLAYS:

One of the most useful things a device can do is communicate information to us- our smartphones wouldn't be much use without their screens! Your Arduino® is much the same, and most projects require some information to be communicated about the sensors they're reading, or how they're doing at the little task we've set them to. Here's a guide to the many different displays that make up the Arduino® range, and some tips on choosing the best one for your application. Whether it be reading out a single number or some brief words, or even a complex graphical display, there's one to suit your project.

3.5" Touchscreen with Enclosure & Stylus

Perfect for prototyping or to set up a portable device with your Raspberry Pi 3B+. The 3.5" LCD touchscreen requires minimal setup. Supplied with a handy stylus and protective case.

Note: Raspberry Pi 3B+ sold separately

duinotech

Specifications	XC4631
Screen Type	Resistive TFT
LCD Interface	SPI
Screen Controller	XPT2046
Colours	65536
Backlight	LED
Resolution	480 x 320

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4631	$49.95	$44.95	$39.95

240x320 LCD Touchscreen

A large, colourful touch display shield which piggy-backs straight onto your UNO or MEGA. Display photos from the microSD card slot on the display to create a slick and professional-looking project.

- 320x240 pixel resolution
- Fast Parallel interface
- microSD card slot
- Resistive touch interface
- Dimensions: 77(L) x 52(W) x 19(H)mm

duinotech

Cat.	Qty 1+	Qty 4+	Qty 10+
XC4630	$29.95	$26.95	$23.95

RGB LED Strip Module

Strip of eight RGB LEDs which can be controlled by a single Arduino® pin. Up to 1000 LEDs can be daisy chained and run from one pin.

- Each channel has 256 brightness levels
- Current draw 500mA per module maximum
- 5V supply.
- Eight RGB LEDs
- 54(L) x 10(W) x 3.5(H)mm

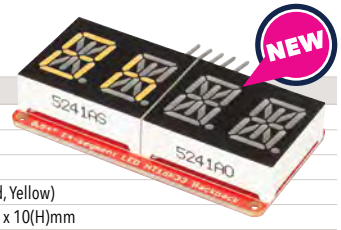
duinotech

Cat.	Qty 1+	Qty 4+	Qty 10+
XC4380	$9.95	$8.95	$7.95

Quad 14 Segment Alphanumeric Display Module

This unit, which measures only 50L x 28W x 10H features an impressive 0.54inch (14mm) character height enabling you to display all alphanumerics in either red or yellow. 4 x 20mm mounting holes are provided, enabling you to fix the unit behind a panel with a suitable red or yellow perspex filter for a very professional display. It is quite bright but is capable of being dimmed.

NEW



Specifications	XC3715
Power	5VDC
Interface	Up to 12DC
LED Type	14 Segment
Illumination Type	Bi-colour (Red, Yellow)
Dimensions	50(L) x 28(W) x 10(H)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
XC3715	$9.95	$8.95	$7.95

8 Digit 7 Segment Display Module

Building a project with heaps of 7-segment displays is always going to look awesome, but unless you have the right hardware, it can use up a lot of IO pins. The MAX7219 based 8 Digit 7 Segment Display module takes care of that, running all eight digits from just three IO pins. Extra units can be daisy-chained from the end of the previous unit for truly huge displays.

- SPI interface
- 15mm panel height with red 9mm digits
- MAX7219 features dimming and digit decoding

	Cat.	Qty 1+	Qty 4+	Qty 10+
8 Digit 7 Segment Display Module	XC3714	$9.95	$8.95	$7.95

LED Traffic Light Module for Arduino

RED, YELLOW, GREEN. Stop, Caution, Go. These are universal colour codes, and this Arduino® module has many uses. From creating a miniature set of traffic lights for understanding how they work, through to building a model roadway or even setting up a basic status display for your next project.

- 10mm Red, Yellow, Green LEDs
- Inbuilt dropping resistors
- Right angle plugs for standing up in breadboard
- Common ground connection

Cat.	Qty 1+	Qty 5+
XC3720	$12.95	$11.45

Make it

Finished Project

INTRUDER ALERT

Uses a Passive Infrared (PIR) sensor to detect movement and send an email alert to yourself. The sky's the limit when you use this simple IFTTT IoT device to secure your premises. Easy to build. No special wiring required.

See step-by-step instructions at:

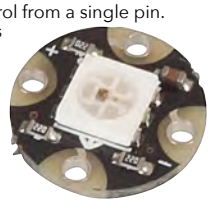
jaycar.com.au/intruder-alert

FOR MICROCONTROLLERS: DISPLAYS CONTINUED

WS2812 RGB LED Module

The WS2812 RGB LED module provides full PWM control of the three LED channels in a single IC with control from a single pin. The IC is mounted on a small PCB that suits 0.1" pitch protoboards and breadboards. Can daisy-chain modules.

- Great for creating custom RGB LED displays
- Same IC as XC4380 Arduino® module



Cat.	Qty 1+	Qty 10+	Qty 25+
ZD0272	$4.95	$4.45	$3.45

LoL Shield

The LoL Shield is a charlieplexed LED matrix for the Arduino®. LEDs are individually addressable so you can use it to display anything in a 9 x 14 grid. Scroll text, play games or display images, you can choose to use the LoL Shield Library or program the animation manually.

- 126 individually controlled LEDs
- Great DIY solder project

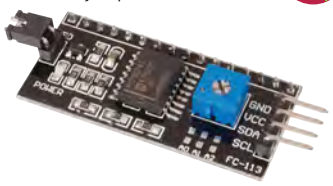
duinotech

Cat.	Qty 1+
XC4546	$19.95

I2C Port Expander Module for LCD's

The HD44780 compatible LCDs are great for displaying text and simple graphics, but quickly use up your available microcontroller pins. Using the PCF8574 port expander IC, you can control these LCDs using just 2 pins via I2C. The breakout board offers pin multiplexing, contrast control pot, LED backlight jumper control, and up to 8 unique addresses via solderable jumpers.

- Designed to solder directly to 16pin SIL headers
- Mounts behind LCD panel, taking up minimal space
- Arduino® libraries offer direct LCD control

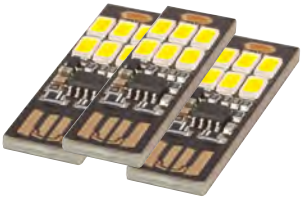


Cat.	Qty 1+	Qty 4+	Qty 10+
XC3706	$9.95	$8.95	$7.95

USB Mini LED Touch Modules - 3 Pack

Featuring 6 tiny LEDs, these little lights are about the size of a USB flash drive, but have a touch-controlled light! Plug them in to computers, wall sockets with USB, and anything else you have with a USB outlet! Simply touch to activate on / off, or touch and hold for dimming. Sold in packs of three, because you'll never want just one!

- Touch control - ON/OFF (quick touch), Dimming (Continuous)
- With smart touch electrodeless dimming switch
- Double USB design, both sides can be used as plug
- Compatible with all standard USB devices such as power banks, mobile chargers, computers or laptops, etc



	Cat.	Qty 1+	Qty 3+	Qty 6+
3 Pack	ZD1688	$12.95	$11.45	$9.95

Buying Online? Use Paypal!

PayPal

You can use PayPal for any online orders, for delivery or 1hr Click and Collect pickup. Just select PayPal during checkout for added convenience!

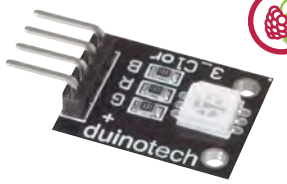
FOR MICROCONTROLLERS
LED & LASER:

Sometimes when you need to provide output from a project, a full-on display is too much, or takes up too much space. The modules below are great if you want to your sketch to show what's going on with a simple 'GREEN IS OK' type of indication. If you want to shine some light and a basic LED is not enough, look at the higher powered XC4468 LED or XC4490 Laser modules.

RGB LED Module

Using a 5050 RGB LED, by adjusting a PWM signal on the three primary colours the user can gain the full colour spectrum. This tiny module can be interfaced with a variety of microcontrollers.

- 3.3V to 5V operation
- 4 pin header
- Common ground LED
- Dimensions: 25(L) x 15(W) x 2(H)mm



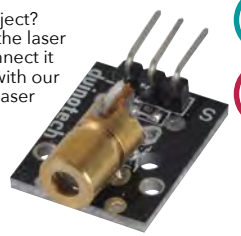
duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4428	$4.95	$4.45	$3.95

Red Laser Diode Module

Need a red laser light for your latest project? Here it is! Everything you need to drive the laser diode is included on the board. Just connect it to 5VDC and you're good to go! Use it with our light sensor module XC4446 to make a laser tripwire.

- Operating Voltage: 5VDC
- Output power: <1mW
- Wavelength: 650nm(Red)
- Dimensions: 45(W) x 23(D) x 10(H)mm



duinotech

Cat.	Qty 1+	Qty 5+
XC4490	$4.95	$4.45

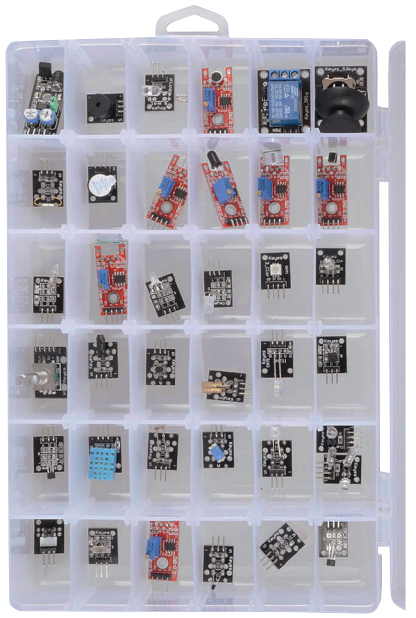
MODULE VALUE PACKS

37 Piece Deluxe Modules Package

With 37 different sensors and modules, this kit covers just about every input and output you can poke a soldering iron at. Packaged in a clear plastic organiser.
See our website for detailed code samples.

- Joystick Module
- Relay Module
- Microphone Module
- Line Tracking Sensor
- Obstacle Avoidance Sensor
- Hall Effect Sensor
- Touch Sensor

See website for full list of included modules.



duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4288	$79.95	$71.95	$63.95

For Microcontrollers

OBSTACLE AVOIDANCE & DISTANCE DETECTION:

What good is a robot if it can't gather information about its surroundings? This collection of modules is ideal to add to a robot or roving autonomous project. You could use an array of XC4442 Ultrasonic Sensor Modules to map out a robot's surroundings and have the Arduino® plan its next movement, or use the XC4611 Triple Reflectance Module to sense the surface underneath your robot, or even create a space age musical instrument like the Ultrasonic Theremin.

PIR Motion Detector Module

A pyroelectric infrared PIR motion sensor is a handy addition to any Arduino® project. Wide operating range and delay times changeable via two potentiometers giving this module versatility to the user, it is a must for any security application.

- Working voltage: 5-20VDC
- Quiescent current: 65uA
- Level output voltage: High 3V / Low 0V
- Delaying time 0.3-18s
- Dimensions: 32(L) x 24(W) x 25(H)mm

duinotech

Cat.	Qty 1+	Qty 5+
XC4444	$5.95	$5.50

Dual Ultrasonic Sensor Module

The popular HC-SR04 ultrasonic distance module provides an easy way for your duinotech to measure distances up to 4.5m. Use it to add obstacle avoidance to your next robotics project or mount it on a servo to create your own ultrasonic SONAR!

- Uses just two digital pins
- Operating Voltage: 5V
- Sensor Angle: <15°
- Detection Distance: 20mm - 4.5m
- Dimensions: 45(W) x 20(D) x 13(H)mm

duinotech

Cat.	Qty 1+	Qty 5+
XC4442	$7.95	$7.15

Infrared Obstacle Avoidance Sensor Module

This module is an inexpensive solution for an obstacle avoidance sensor, perfect for robotic projects and very easy to interface directly with Arduino® and compatible boards. It also works with our pcDuino module by using the 3.3V output. The module has two potentiometers one to control frequency and the other to control the intensity.

- 5VDC operation
- Adjustable frequency and intensity
- 4 pin header
- Dimensions: 42(L) x 27(W) x 18(H)mm

duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4524	$7.95	$7.15	$6.35

20-150cm IR Distance Sensor Module and Cable

Use this long-range infrared distance sensor to detect objects up to 1.5m away. The SHARP sensor has an integrated IR emitter and receiver, which sends an analogue signal relating to the distance to your favourite microcontroller. Supplied with a 200mm long cable.

- Analogue output
- 200mm to 1.5m detection range
- 5ms maximum delay between sample reading and output

duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC3735	$18.95	$16.95	$14.95

Triple Reflectance Sensor Module

Create a smarter line-following robot with the Triple Infrared Reflectance Sensor Module. The module has three evenly spaced sensors and mounting holes.

- CTRT5000 Sensor IC
- 5V Supply required
- Only 2 pins needed for power and 3 for outputs
- Dimensions: 69(L) x 32(W) x 8(H)mm

duinotech

Cat.	Qty 1+	Qty 5+	Qty 10+
XC4611	$8.95	$8.05	$7.15

For Microcontrollers

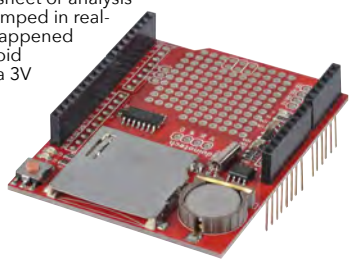
DATA STORAGE:

An Arduino® has a fairly limited amount of storage (certainly compared to the terabytes of data that can be stored on some hard drives), so the shields and modules below can be used to provide an extra place to log data or store resources for your sketch. You might even use one of them to write to a removable card to make it easy to get data to and from a computer.

Data Logging Shield

Extremely easy to set up. Use this datalogging shield to store your data to files on any FAT16 or FAT32 formatted SD card, or have it to be read by any plotting, spreadsheet or analysis program. All data stored is timestamped in real-time so you know precisely what happened when! Uses a 3.3V converter to avoid damaging your SD card. Includes a 3V button battery.

- Stackable headers
- Reset button
- Changeable CR1220 battery
- 102 solder pads
- Dimensions: 43(L) x 17(W) x 9(H)mm



duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4536	$19.95	$17.95	$15.95

SD Card Interface Module

Features 5V and 3.3V power inputs and resistors to allow safe on either IO voltage.

- Push-pull style SD Card Socket
- Works with inbuilt Arduino® Libraries
- 52(L) x 31(W) x 12(H)mm

duinotech

Cat.	Qty 1+	Qty 4+	Qty 10+
XC4386	$9.95	$8.95	$7.95

microSD Card Shield for Wi-Fi Mini

Add gigabytes of storage to your XC3802 Wi-Fi Mini Main Board with this tiny shield and a microSD card. If you are using the XC3802 Wi-Fi Mini Main Board as a WebServer or even for datalogging, you're probably going to need more storage space, and this shield lets you use cheap microSD cards with the easy-to-use Arduino® SD library.

- CS on D8
- Stackable Headers pre-soldered to allow more shields to be added
- Works with Arduino's inbuilt SD library
- 3.3V compatible only

Cat.	Qty 1+	Qty 3+	Qty 6+
XC3852	$9.95	$8.95	$7.95

compatability icons

Arduino® Compatible

Raspberry Pi Compatible

For Microcontrollers

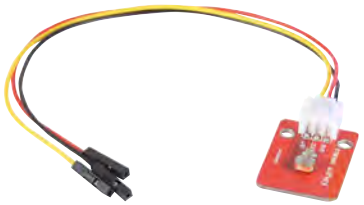
TEMPERATURE & ENVIRONMENT:

There's no shortage of Arduino® weather station projects online, and with the duinotech range of sensor modules, you can create your own fully featured version. Alternatively, if you just want to check if the plants need watering or know if the sun is shining or how hot it is outside, we've got you covered with the range here.

Photosensitive LDR Module

Measure light levels with this sensor module. This module uses a light dependant resistor to produce an output voltage that varies with light level. Connect it straight into your duinotech or other Arduino® compatible board to build a night/day sensor, a sun tracker or combine it with our laser module XC4490 to make a laser trip wire.

- Operating voltage: 3-5VDC
- Includes breakout cable
- Dimensions: 29(W) x 22(D) x 10(H)mm



duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4446	$5.95	$5.35	$4.75

Colour Sensor Module

One of the Arduino® projects that everyone should try is the coloured lolly sorter, and you can't build one of these without a colour sensor. The Colour Sensor Module can give individual greyscale, red, green and blue colour levels with just three IO pins, and features bright white LEDs for even illumination.

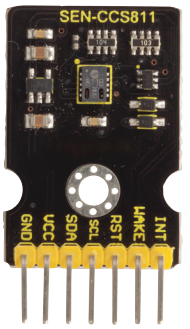
- Mounting holes for easy project building
- Can be set to read red, green, blue or greyscale levels
- Very fast response times with PWM output
- Optimal detection distance 1cm

Cat.	Qty 1+	Qty 4+	Qty 10+
XC3708	$19.95	$17.95	$15.95

Air Quality Sensor with CO2+Temperature

This air quality sensor can detect a wide range of volatile organic compounds (TVOCs), including equivalent carbon dioxide (eCO2) and metal oxide (MOX) levels. It also features a 10K precision 1% NTC thermistor, which can be used to measure the specific temperature in the environment. Equivalent carbon dioxide (eCO2) is measured in the range of 400 to 8192ppm (parts per million), and various volatile organic compounds (TVOC) ranges from 0 to 1187ppb (parts per billion). Includes 3mm mounting holes for fixed applications.

- Measures eCO2 & MOX levels
- Ultra-low power consumption
- CCS811B chip
- Precision NTC thermistor
- 0-1187ppb TVOC Measurement Range
- 400-8192ppm eCO2 Measurement Range



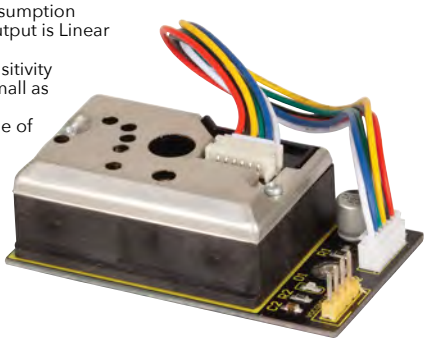
duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC3782	$34.95	$30.95	$27.95

Dust Sensor Module

Use this air quality sensor to detect the amount of dust in the air. The small board has a Sharp GP2Y1014AU optical sensor onboard that uses an infrared LED and photoelectric transistor to detect reflected light from dust in the air. Fine particles as small as 0.8µm in diameter can be detected, including smoke particles, such as cigarette smoke.

- Ultra-Low Power Consumption
- Analogue Voltage Output is Linear with Dust Density
- 0.5V/(0.1mg/m3) Sensitivity
- Detects Particles as Small as 0.8µm
- 0.9V Reference Voltage of Clean Air



duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC3780	$23.95	$21.45	$18.95

Smoke Detector Sensor Module

A compact smoke detector module that can detect butane, propane, methane, alcohol, hydrogen, and smoke. Suitable for home automation and safety projects.

- Power: 5V
- Interface: Analogue
- Dimensions: 40(L) x 20(W)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4470	$8.95	$8.05	$7.15

RTC POWER POINT TIMER WITH ARDUINO®

Using Arduino® to control a 240V appliance but don't want to get zapped? Well then, here is your solution. Building on the simplicity of the Arduino® Clock, we've developed a project that interfaces to our MS6148 Remote Controlled Mains Outlet using a 433MHz transmitter and adding some extra code, gives you a mains timer with the following features:

- **Switch on/off appliances with a minute of resolution**
- **Keeps time during power off**
- **Programme up to 99 timers**
- **Can be set for any or all days of the week, weekdays or weekends**
- **Can be set to turn single channel or all channels on or off**
- **Manual control of transmitter for setup and troubleshooting**

And being Arduino®, there's nothing to stop you taking the code apart and adding your own features.

See step-by-step instructions at:

jaycar.com.au/diy-rtcpowerpointtimer

TEMPERATURE / ENVIRONMENT CONTINUED

Alcohol Sensor Module

Using a MQ series gas sensor, this module easily adds alcohol detection to your project. An analog output can be used to monitor changes in alcohol concentration, while a digital output is triggered when the concentration exceeds a pre set threshold. Build your own breathalyser or automate your home-brewing.

- Twin Analog and Digital Outputs
- Adjustable sensitivity
- Operating voltage: 5VDC
- Dimensions: 50(L) x 20(W) x 13(H)mm

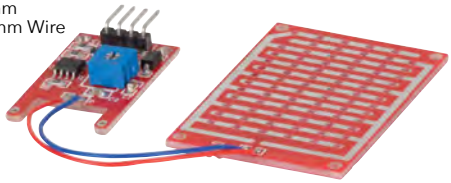
duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4540	$9.95	$8.75	$7.75

Rain Sensor Module

Add another dimension to your Arduino® weather project. This compact module can be used to detect rain, and can be separated into a sensor and control board to keep the important bits dry.

- 5V supply needed.
- Adjustable sensitivity
- LED indicator
- TTL level output can drive 100mA, enough for a small relay or buzzer
- Sensor: 50 x 35 x 1mm
  Control: 47 x 26 x 6mm Wire
  Length: 75mm



duinotech

Cat.	Qty 1+	Qty 5+	Qty 10+
XC4603	$7.95	$7.15	$6.35

Soil Moisture Sensor Module

Automate your garden with Arduino® and use the Soil Moisture Sensor Module to detect when your plants need watering.

- Analog output
- Works on 3.3V or 5V
- Current less than 20mA
- Dimensions:
  62(L) x 20(W) x 7(H)mm

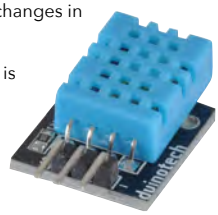
duinotech

Cat.	Qty 1+	Qty 5+	Qty 10+
XC4604	$4.95	$4.45	$3.95

DHT11 Digital Temperature & Humidity Sensor

Measure both temperature and humidity with this nifty module. Full digital operation so no analog to digital calibration is required. Use when expecting rapid changes in temperature.

- Arduino® library available.
- Protocol: 1-Wire (Not Dallas 1-Wire, one data pin is required per sensor used)
- Operating Voltage: 3-5 VDC
- Temperature Range: 0 °C - 50 °C +/- 2 °C
- Humidity Range: 20 – 80% +/- 5%
- Sample Rate: 1Hz
- Dimensions: 52(W) x 20(L) x 13(H)mm



duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4520	$9.95	$8.75	$7.75

Temperature Sensor Module

This module provides a simple way to measure temperature. The module outputs an analog voltage that varies directly with temperature. Connect it straight to one of your duinotech analog inputs.

- Operating voltage: 5VDC
- 210mm breakout cable included
- Dimensions: 33(W) x 22(D) x 9(H)mm

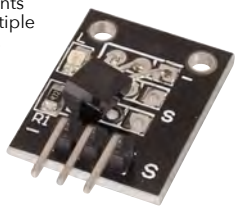
duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4494	$6.95	$6.25	$5.55

Digital Temperature Sensor Module

The DS18B20 Digital temperature Module provides up to 12bits of resolution and 0.5 degree accuracy through a single digital IO pin with no external components needed for connection to a microcontroller. Multiple devices can even be connected to the same pin.

- Fully digital operation
- Conversion time less than 1 second
- Arduino® library (OneWire) available



Cat.	Qty 1+	Qty 4+	Qty 10+
XC3700	$6.95	$6.25	$5.55

Barometric Pressure Sensor Module

There's heaps of different uses for a barometric sensor, such as using it to forecast the weather or measuring altitude. The Bosch BMP180 sensor also includes a temperature sensor, and is accessible via an I2C interface.

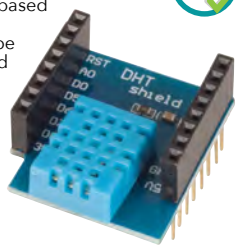
- 0.01hPa and 0.1 degree accuracy (altitude accuracy about 1m)
- Libraries available to given direct altitude readout (search for BMP180)
- Tiny module size

Cat.	Qty 1+
XC3702	$9.95

DHT 11 Shield for Wi-Fi Mini

Create a tiny environmental sensor node with the XC3802 Wi-Fi Mini Main Board and this DHT11 based temperature and humidity sensor shield. Pre-soldered stackable headers allow the shield to be plugged straight into Wi-Fi Mini Main board, and more boards to be added on top.

- Tiny sensor shield
- Uses pin D4 for DHT11 interface
- Arduino® libraries available
- Suitable to plug into breadboard for prototyping



Cat.	Qty 1+	Qty 3+	Qty 6+
XC3856	$9.95	$8.95	$7.95

compatability icons

Arduino® Compatible

Raspberry Pi Compatible

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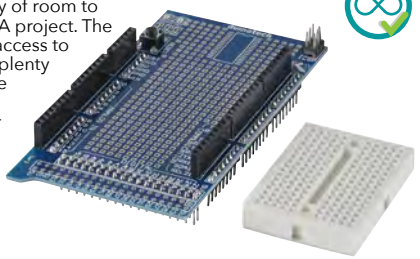
For Microcontrollers
PROTOTYPING & BREAKOUT:

The following parts are ideal for taking that design that you've squashed onto a breadboard, and making it into something more permanent. With prototyping space, you can solder individual components or even whole modules together to create a custom shield that is much more robust.

Prototyping Shield for Duinotech MEGA

This shield gives you plenty of room to prototype your latest MEGA project. The stackable shield provides access to all of the MEGAs pins and plenty of solder pads to prototype on. A small solder-less breadboard is included for fast prototyping.

- Dimensions: 106(W)x56(L)x19(H)mm



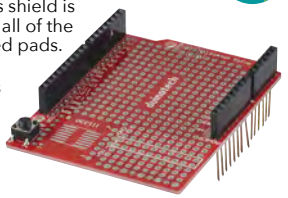
duinotech

	Cat.	Qty 1+	Qty 5+
	XC4416	$12.95	$11.35

Prototyping Shield

This stackable shield makes semi-permanent prototyping simple. When you want something more permanent than a breadboard, but don't want to make your own PCB, this shield is the answer. Provides solder-pad access to all of the Arduino®'s pins, and a large area of isolated pads.

- Includes reset button
- SOIC-14 breakout, for surface mount ICs
- Dimensions: 68(L) x 53(W) x 10(H)mm



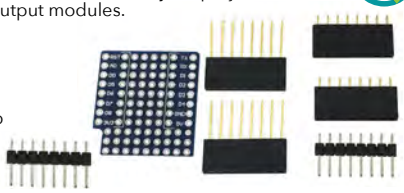
duinotech

	Cat.	Qty 1+	Qty 3+	Qty 6+
	XC4482	$15.95	$14.35	$12.75

Prototyping Shield for Wi-Fi Mini

A prototyping shield to suit the XC3802 Wi-Fi Mini main board. Create custom hardware and add features to your project or build custom sensor nodes or output modules.

Includes:
1 x Protoboard
2 x Male Header Strip
2 x Female Header Strip
2 x Stackable Header Strip



	Cat.	Qty 1+	Qty 3+	Qty 6+
Prototyping Shield for Wi-Fi Mini	XC3850	$4.95	$4.45	$3.95

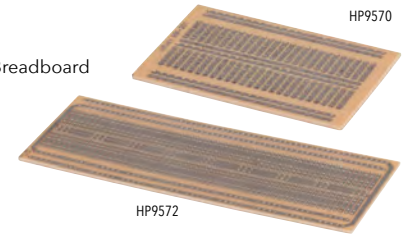
Breadboard Layout Prototyping Boards

A prototyping board that lets you transfer your breadboard design without having to rework it. Includes five holes on each side per row and power rails running the length of the board.

Two sizes to choose from:

SMALL:
- 25 rows, 400 holes
- Similar layout to PB8820 Breadboard
- 73mm x 47mm x 1.4mm

LARGE:
- 59 rows, 862 holes
- Similar layout to PB8815 Breadboard
- 155mm x 58mm x 1.4mm



	Cat.	Qty 1+	Qty 4+	Qty 10+
400 hole	HP9570	$4.95	$4.45	$3.95
862 hole	HP9572	$9.95	$8.95	$7.95

click & collect

Click and Collect is now available at all Jaycar stores! Simply place your order online and the team at your local store will get the order together for you, ready to collect in just 1 hour!

For Microcontrollers Programming
UPLOADING & CUSTOM:

If you feel like there isn't quite an Arduino® main board or module that suits what you're trying to build, or your stack of shields is just too big, the parts below can help you make the next step towards custom building your own board. The various programmers will also allow you to explore the world beyond what the default Arduino® IDE and bootloaders offers. Did you know you can even use the XC4464 USB to Serial Adaptor to program the XC4614 Wi-Fi Shield as though it was a stand-alone Arduino® board?

AVR ISP 10 Pin to 6 Pin Adaptor

Adaptor from 10 pin ISP header to 6 pin ISP header as found on Arduino® boards.

- Use with an ISP programmer to update bootloaders or reflash bricked boards
- 10 pin plug to 6 pin socket

duinotech

	Cat.	Qty 1+	Qty 5+	Qty 10+
	XC4613	$4.95	$4.45	$3.95

ISP Programmer for AVR

Compatible with Arduino® boards with ISP, ATmega328P MCU and fully supported by the Arduino® IDE, allowing you to unbrick, install or update Arduino®-compatible boards and your own custom-made projects.

- Compatible with a wide range of microcontrollers, including all Duinotech main boards
- 10 pin ISP programming cable included (use XC4613 to convert to 6 pin)

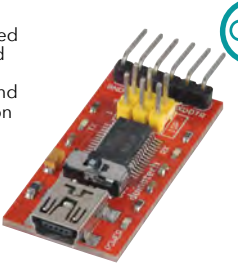
duinotech

	Cat.	Qty 1+	Qty 3+	Qty 6+
	XC4627	$14.95	$13.45	$11.95

FTDI USB to Serial Module

A mini-USB to 6-pin serial port module used to communicate with Arduino® boards and modules. It uses the original FT232 chip with power/sending/receiving indicator and also a selectable 3.3V and 5V power option to suit different boards.

- 3.3V & 5VDC power switch
- Send & receive indicators
- Dimensions: 43(L) x 17(W) x 12(H)mm



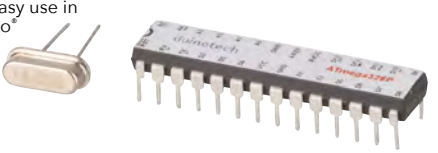
duinotech

	Cat.	Qty 1+	Qty 3+	Qty 6+
	XC4464	$19.95	$17.95	$15.95

ATmega328P MCU IC with Arduino® UNO Bootloader & 16MHz Crystal

An Atmel AVR ATmega328P microcontroller for you to build your very own customised Arduino® compatible projects. For your convenience it comes with the Arduino® UNO bootloader preinstalled and features a label on top which details the pinouts. Includes 16MHz crystal oscillator.

- Same IO pins as Duinotech UNO Board
- 0 - 4MHz @ 1.8 - 5.5V, 0 - 10MHz @ 2.7 - 5.5V, 0 - 20MHz @ 4.5 - 5.5V
- 28-pin DIP format for easy use in breadboards or Arduino® compatible boards



duinotech

	Cat.	Qty 1+	Qty 10+	Qty 25+
	ZZ8727	$12.95	$11.65	$9.05

p.A140 - Development Boards

DIY Projects

AV & COMMS PROJECTS:

Finished projects shown

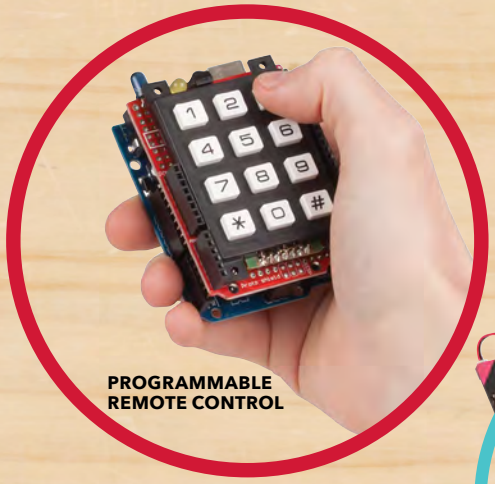
DUINOTECH METRONOME

Make a Metronome

We usually think of soldering irons, pliers and oscilloscopes when we think of electronic tools, and while this project may not be useful to the electronics enthusiast, we think it's a good way of showing how Arduino® based tools can be useful in other fields- in this case for musicians.

The Duinotech Metronome has adjustable tempo between 20 and 240bpm, and can be set to accent anywhere between every beat and every eighth beat. It also gives a display of the classical name for that tempo.

jaycar.com.au/metronome



PROGRAMMABLE REMOTE CONTROL

Build a Programmable Remote Control

One of the really great things about the Arduino® community is how many extra features they have added to the IDE.

In this project, we'll be using a library which has been created by one of the members of the Arduino® community, and has been added to by other members.

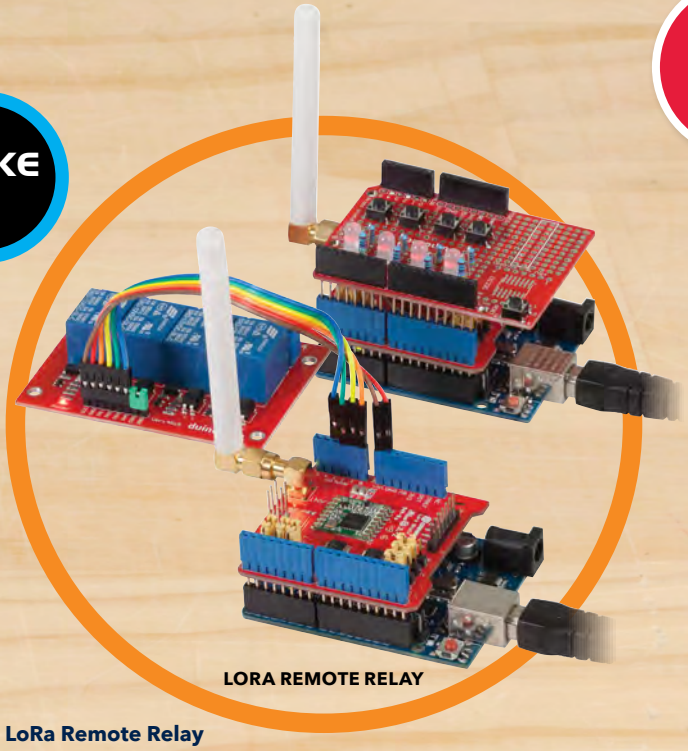
It's a Programmable Remote Control, which is perhaps similar to a 'Learning Remote Control', except that it can give a lot more information about the codes it is sending. Check out the library documentation for the protocols that are supported. Some soldering required!

You'll also need some offcuts of wire to build the project- we used some coloured ribbon cable offcuts to help identify which wire is which.

jaycar.com.au/prog-remote-control

DIY Projects

LORA PROJECT:



LORA REMOTE RELAY

LoRa Remote Relay

We are very excited to get the chance to play with our new LoRa Shields, and test just how far we could get a signal using LoRa technology.

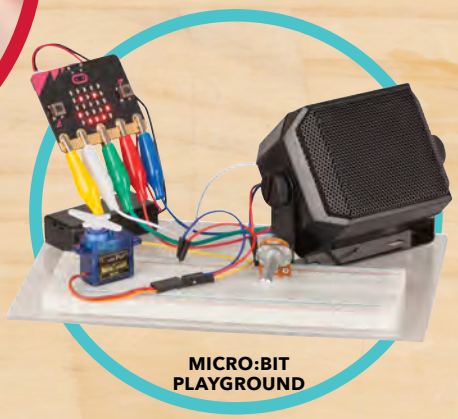
With one of our tests, we were able to get a signal to travel about 200m, including through the corrugated iron of the warehouse and the concrete office building.

We set about building a practical project that would make best use of the technology.

The LoRa Remote Relay is basic- four buttons at one end and four relays at the other end.

It also has LED's next to the buttons, so unlike other remote relay systems, there is feedback that the relays are operating as commanded.

jaycar.com.au/lora-remote



MICRO:BIT PLAYGROUND

micro:bit Playground

Play around with the basics of micro:bit. There's three games to build:

Game 1: Keep in beat of the music.

Game 2: Find the point via sound.

Game 3: Get the servo to 90° for 3 seconds..

jaycar.com.au/microbit-playground

MORE DIY PROJECTS ONLINE:

There's plenty of other projects to build on our website.

jaycar.com.au/projects

DIY Projects

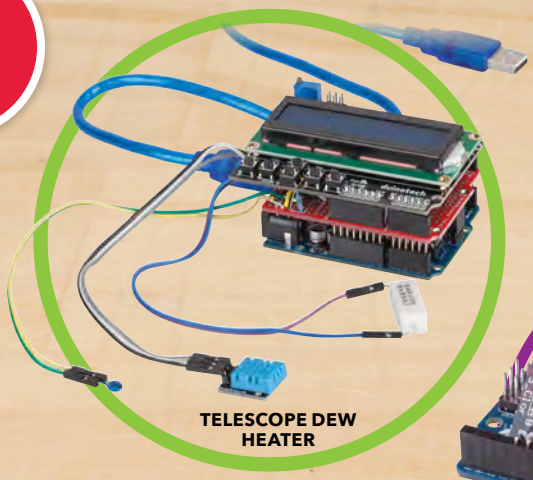
MONITORING PROJECTS:

Finished projects shown

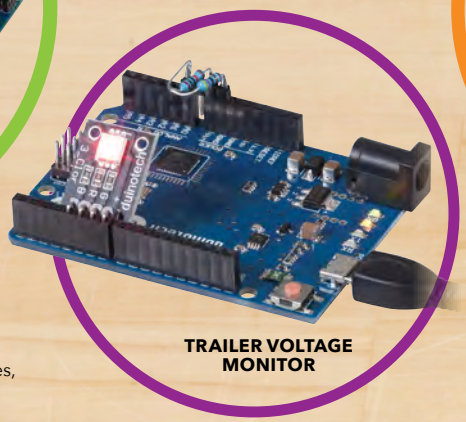
make it

DIY Project

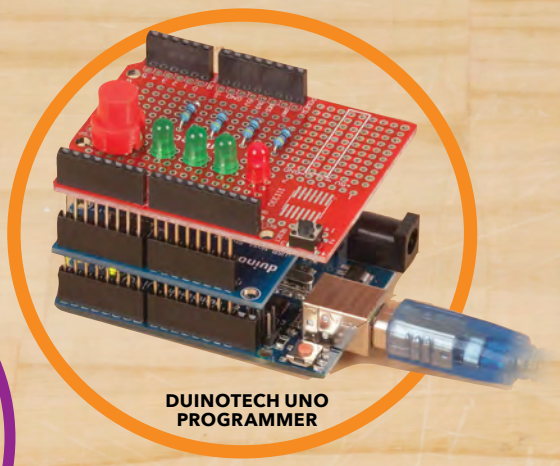
PROGRAMMING:



TELESCOPE DEW HEATER



TRAILER VOLTAGE MONITOR



DUINOTECH UNO PROGRAMMER

Make a Telescope Dew Heater

This project brings together a few Duinotech modules and some other parts to create a versatile tool.

Inspired by the Dew Heaters used on telescopes, it senses ambient temperature and humidity to control a small heater.

Not just for telescopes, but anything that needs to avoid condensation.

Features include:

- Programmable temperature setpoint
- Temperature target can be set above ambient or dewpoint
- Settings can be saved to EEPROM
- Adjustable failsafe heater output to use if sensors are faulty
- Comprehensive LCD info screen

jaycar.com.au/diy-telescope-dew-heater

Trailer Voltage Monitor

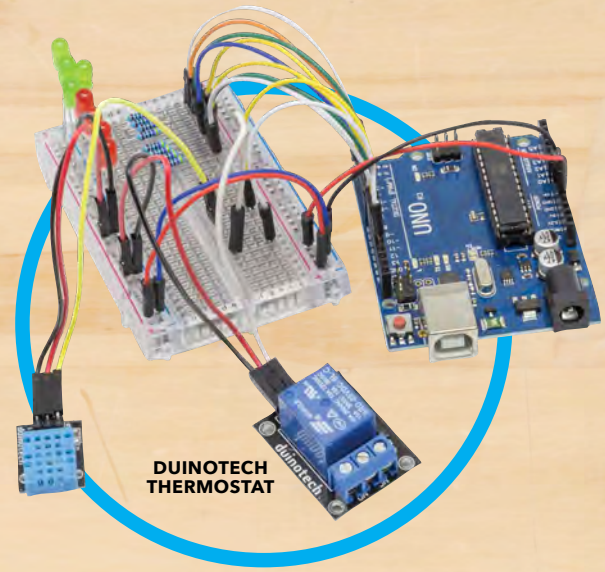
One of the guys at the office here asked if I could build an Arduino® device for monitoring the voltage of the 12V battery in his trailer- as now required for registration of some trailers which have electric brakes. Here's what we built- and it's a bit cheaper than some of the offerings out there.

jaycar.com.au/trailervoltagemonitor

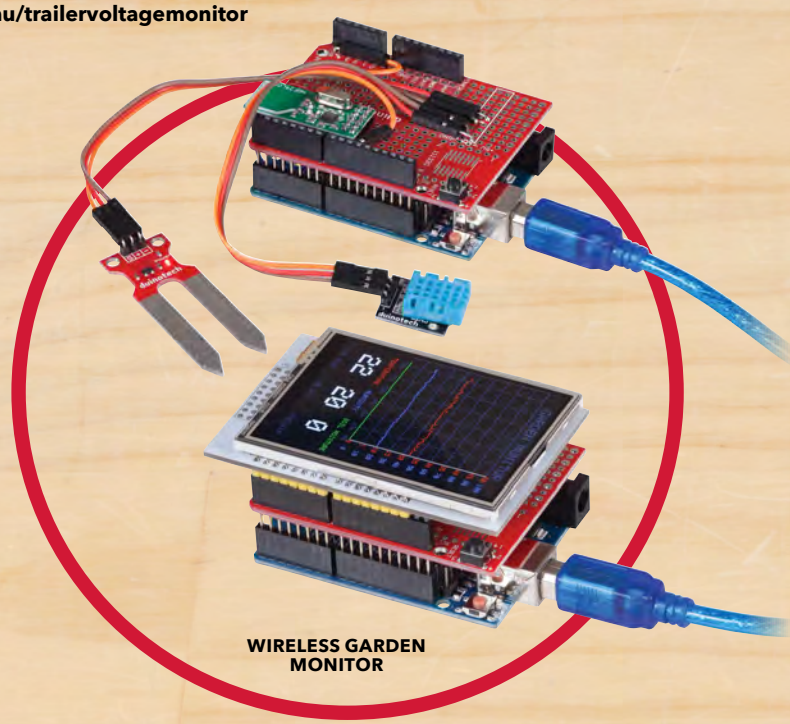
Build a UNO Programmer

The idea of using an UNO to program an UNO sounds a bit meta, but with a USB Host Shield, we managed to program our UNO's. In fact, the programming only takes about three seconds per board, which is even faster than we could unpack them. Some soldering required.

jaycar.com.au/uno-programmer



DUINOTECH THERMOSTAT



WIRELESS GARDEN MONITOR

Make a Duinotech Thermostat

Here's a project that will take you into the world beyond the basics of the duinotech Learning Kit. We're going to build a project that shows how we can use the Learning Kit with other modules, and also how to incorporate an external library to extend our programming possibilities.

It's a thermostat, which is nothing more than a relay which responds to temperature.

We've added some colour to it by connecting some LEDs to give an indication of the current temperature.

jaycar.com.au/arduino-thermostat

Build a Wireless Garden Monitor

Here's a project that uses two Arduino® boards to communicate wirelessly- the first Arduino® reads a soil moisture sensor and a temperature and humidity sensor, and sends the data to a second Arduino® that displays the data in a graph and text. You can use it to monitor when your garden needs watering, or even as a basic weather station. Alternatively, you could use completely different sensors to create your own custom monitor.

jaycar.com.au/wireless-garden-monitor

RETRO > Gaming

Now you can create your own Retro Gaming console and still have professional controls and finish.

These enclosures allow you to install your own Raspberry Pi and get a true retro experience, with quality user controls.

Raspberry Pi Retro Arcade Game Consoles

Let the games begin with this exciting retro arcade console. The console with classic design features a joystick with six buttons for two players, Simply install a Raspberry Pi V3 or V4 into the console, insert a Retropie installed microSD card, copy over some ROMS and you are ready to battle and enjoy some of your old favorites. The brains of this arcade console is a Rapsberry Pi, video is sent via HDMI to connect to a TV, computer monitor or projector, and an audio out via the Raspberry Pi's 3.5mm headphone jack allowing you to connect to an amplifier or active speakers. The case measures 650mm wide and has anti-slip rubber feet for stability. Supplied with mains power adaptor, 3m VGA lead, 3m HDMI lead, 3m USB lead, and two replacement gaming buttons. Recommended for ages 15+.

Note: Requires Raspberry Pi (XC9001 p.A88) & RetroPie Operating System (XC9031 opposite)

Specifications	XC9062
Resolution	1280 x 720
Dimensions	650(W) x 235(D) x 125(H)mm

	Cat.	Qty 1+
HDMI Connection	XC9062	$99.95

Build your own Pi Retro Arcade Game Console

Be the envy of all your mates with the mini table top Raspberry Pi retro arcade console, boasting a massive 10 inch LCD screen, there is plenty of gaming real estate to enjoy all your favorites form back in the day, built in speaker will have you remembering your child hood noises with clarity. The console with classic design features a joystick with six buttons, Simply install a Raspberry pi V3 or V4 into the console, insert a Retropie installed micro sd card, copy over some ROMS and you are ready to battle and enjoy some of your old favorites.

- 290(L) x 345(H) x 280(W)mm

Note: Requires Rasperry Pi (XC9001 p.A88) and Retro Pi Operating System (XC9031 below)

	Cat.	Qty 1+
10" Screen	XC9064	$169.00

RetroPie OS on SD Card for Raspberry Pi

Preloaded with RetroPie, and auto-installs when used for first time. 16GB microSD card. Supplied with an SD card adaptor.

	Cat.	Qty 1+
	XC9031	$24.95

Retro Gaming with Raspberry Pi Book

This 164-page book shows you how to set up a Raspberry Pi to play classic games, and a whole lot more. Build your own portable console, full-size arcade cabinet, and pinball machine with our step-by-step guides. And learn how to program your own games, using Python and Pygame Zero.

	Cat.	Qty 1+
164 pages	BM7166	$34.95

Retro NES Hardware for Raspberry Pi

Our retro inspired controller and gaming case is perfect for building a Raspberry Pi based emulator with that nostalgic feeling. The controller provides a genuine feel, while the case includes access to all ports on your Raspberry Pi, additional USB ports, & a handy storage slot for your spare SD cards.

Note: Requires Raspberry Pi (XC9001 p.A88) and Retro Pie Operating System (XC9031 left)

	Cat.	Qty 1+	Qty 4+	Qty 10+
USB Controller	XC4404	$9.95	$8.95	$7.95
Case 120 x 95 x 44mm	XC4403	$29.95	$26.95	$23.95

Retro NES Gaming Case for Raspberry Pi4

NEW

Our retro inspired gaming case is perfect for building a Raspberry Pi 4 based emulator with that nostalgic feeling. Includes access to all ports on your Raspberry Pi, additional USB ports, and a handy storage slot for your spare microSD cards. Features cut-outs for the dual micro HDMI, Audio/Video, USB and Ethernet ports, as well as the USB-C power connector and access to the microSD card.

Note: Requires Raspberry Pi 4 (XC9104 p.A88) and Retro Pie Operating System (XC9031 shown above)

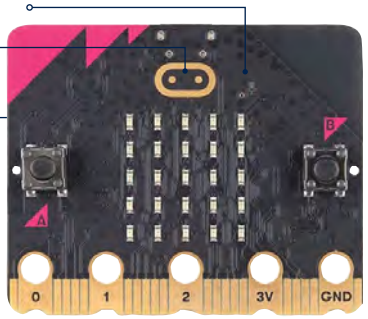
	Cat.	Qty 1+	Qty 4+	Qty 10+
Case 143(W) x 115(D) x 54(H)mm	XC4401	$34.95	$30.95	$27.95

MICRO:BIT & ACCESSORIES

BBC micro:bit V2 GO Development Board Bundle

NEW

The micro:bit is an open source system originally designed by the BBC for use in computer education in the UK and is now available in Australia. Described as being about half the size of a credit card, you can use the accelerometer to detect movement and tilting or the magnetic sensor to detect metal or create a compass. Uses for the 5 x 5 LED display are limited only by the imagination and 2 on-board input push buttons provide instant control. Another 3 inputs are provided via the 5 ring connectors (the other 2 are for power and ground) which can be accessed via alligator clips or banana connectors. On top of this, the ring connectors form part of a larger 23 pin edge connector for more advanced projects. And if that isn't enough, USB and Bluetooth® connectivity allows interfacing with other peripherals! The version two micro:bit board comes now with microphone and speaker so you have easier ways to use sound and touch to get creative. Programming can be done via Microsoft MakeCode or MicroPython, both of which are available on the micro:bit foundation website. Power is via USB or the provided 2 x AAA battery holder (batteries included).



Very easy to operate

micro:bit Bluetooth®

Specifications	XC4324
Bluetooth®	V5.0
CPU	Nordic Semiconductor nRF52833 64MHz
GPU	16 MHz ARM Cortex-M0 microcontroller
RAM	128kB
Flash Memory	512kB
Dimensions	52(L) x 43(W)mm

	Cat.	Qty 1+
micro:bit V2 GO	XC4324	$39.95

Duinotech BBC micro:bit V2 Starter Kit

NEW

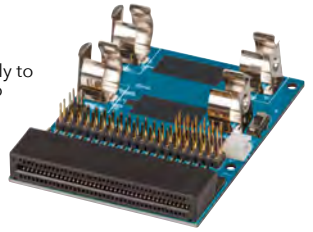
If you are just getting started in the world of electronics and coding or want that ideal gift for a young maker, this kit is the perfect choice. No soldering or prior programming knowledge is required. At the heart of the kit is the micro:bit V2 board which is a powerful, handheld fully programmable microcomputer, designed by the BBC. It has an accelerometer to detect movement and tilting, a magnetic sensor to detect metal or create a compass, and up to 23 inputs to connect to the physical world. The board also has a 5 x 5 LED display and two onboard input push buttons provide instant control. The kit includes common electronics components from resistors to a servo motor, and all the necessary prototyping accessories to get building. A 36-page beginner's guide is also included to get you started.

This is an update to the original XC4322 kit and is now based on the recently released micro:bit V2 board

duinotech

	Cat.	Qty 1+	Qty 3+	Qty 6+
micro:bit V2 included	XC4326	$99.95	$89.95	$79.95

Breakout Board with 2 x AA Battery Holder



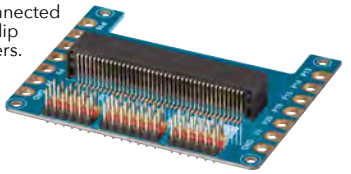
Provides an independent 3V power supply to your micro:bit project and enables you to interface to other hardware. Features a power switch, DIP switch for controlling the power input, and provision for two AA batteries onboard. A 170mm long power lead is also included.

duinotech

	Cat.	Qty 1+	Qty 3+	Qty 6+
80(L) x 58(W) x 19(H)mm	XC4330	$19.95	$17.95	$15.95

Breakout Board to External Sensors

Enables you to connect multiple sensor modules to your micro:bit. Breaks out all IO pins on the edge of the micro:bit main board for you to connect alligator clips or jumper wires. Power can be provided from the battery pack connected to the micro:bit from the alligator clip terminals or by using the pin headers. Four mounting holes are provided so you can mount the shield to a panel.



- 2.54mm Pin Pitch

duinotech

	Cat.	Qty 1+	Qty 3+	Qty 6+
76(L) x 63(W) x 12(H)mm	XC4336	$14.95	$13.45	$11.95

Prototype Board with 400 Pin Breakout Board

Designed to break out all of the IO pins on your micro:bit for you to create additional circuits and hardware. Prototype using the supplied 400-hole breadboard or solder directly to the board for a permanent circuit. Onboard headers provide input and output connections and an integrated power supply provides 3V power from a connected 5-9VDC power adaptor (not included).

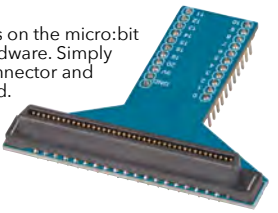
duinotech

	Cat.	Qty 1+	Qty 3+	Qty 6+
105(L) x 85(W) x 13(H)mm	XC4332	$23.95	$21.45	$18.95

T-Adaptor Shield

Use this breakout board to access all 23 pins on the micro:bit in order to create additional circuits and hardware. Simply insert your micro:bit firmly into the edge connector and plug the shield directly into your breadboard.

- 80 Pin Connector



duinotech

	Cat.	Qty 1+	Qty 3+	Qty 6+
70(L) x 58(W) x 20(H)mm	XC4334	$14.95	$13.45	$11.95

Getting Started with BBC micro:bit

This book will show you how the micro:bit can be used in a wide range of applications from simple domestic gadgets to more complex control systems such as those used for lighting and security applications. Using Microsoft Coding Blocks, the book provides a progressive introduction to coding as well as interfacing with sensors and transducers.

- Soft cover, 128pages, 198x129mm

	Cat.	Qty 1+
128 Pages NEW	BM7168	$24.95

Python Coding on BBC micro:bit

Python is a leading programming language, easy to learn and widely used by professional programmers. This book uses MicroPython, a version of Python adapted for the BBC micro:bit. This book is written in plain English and avoids technical jargon wherever possible to cover coding instructions common to most programming languages. Suitable for any age or level of experience.

- Soft cover, 200x129mm

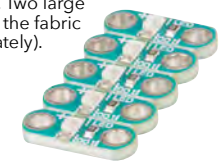
	Cat.	Qty 1+
128 Pages NEW	BM7170	$24.95

WEARABLE TECHNOLOGY HARDWARE

These products are designed to be sewn onto a costume or fabric based project to provide amazing lighting effects. Combine with other LED Raft Pads, Slide Switch Power Pads, and Battery Holder Power Pads, sold separately, to create a dazzling 'light show' on your e-clothing, cosplay outfit, mask, hat, hero cape, jacket, handbag and other theatrical designs. Sew together using the Stainless Steel Conductive Thread.

LED Raft Pads

The lightweight board measures approximately 13mm in length and has a surface-mount LED with resistor to limit the current. Two large sew tabs enable you to easily sew the raft pad onto the fabric using conductive thread (use WW4100, sold separately).

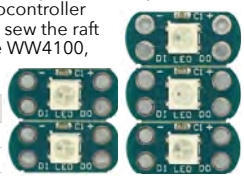


Specifications	ALL
Power	3.0V Typical, 3.3V max.
Dimensions	13(L) x 5.5(W) x 2.5(H)mm

Colour	Pack	Cat.	Qty 1+	Qty 3+	Qty 6+
Red	10	KM1038	$6.95	$6.25	$5.55
Yellow	10	KM1034	$6.95	$6.25	$5.55
Green	10	KM1036	$6.95	$6.25	$5.55
White	5	KM1032	$4.95	$4.45	$3.95

RGB LED Raft Pads

The lightweight board has a surface-mount RGB LED with resistor to limit the current. The LED is addressable, which means they can be daisy-chained together and controlled individually from a microcontroller (eg. Arduino). Four sew tabs enable you to easily sew the raft pad onto the fabric using conductive thread (use WW4100, sold separately).



Specifications	KM1040
Power	3.0V Typical, 3.3V max.
Dimensions	20(L) x 10(W) x 3.5(H)mm

Colour	Pack	Cat.	Qty 1+	Qty 3+	Qty 6+
RGB	5	KM1040	$6.95	$6.25	$5.55

Power Pad

The lightweight board measures just under 30mm in diameter and has four small mounting holes for you to easily sew the board onto the fabric using conductive thread (use WW4100 sold separately). The battery holder supports CR2025 or CR2032 batteries (not included).

Specifications	KM1060
Battery	Supports CR2025 or CR2032 cells
Dimensions	29(Dia.) x 6(H)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Pack of 2	KM1060	$7.95	$7.15	$6.35

Power Pad Slide Switch

The lightweight board measures just 18mm in length, and has two large mounting holes for you to easily sew the board onto the fabric using conductive thread (use WW4100, sold separately).

Specifications	KM1058
DC Rating	500mA
Switch	SPST
Dimensions	18(L) x 7.5(W) x 5(H)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Pack of 2	KM1058	$7.45	$6.70	$5.95

Silicon Rubber Hook up Wire for Electronic Clothing

This wire is superior to conductive thread for wiring clothing for LED lighting effects in clothing. It is insulated so wires can cross over each other without short circuits. It is extremely flexible and can be sewn (with a large needle) but it is better to hot melt glue the wires in places. It works well for large, complex clothing lighting projects where crossover wiring is very desirable.

		Cat.	Qty 1+	Qty 4+	Qty 10+
8m		WH3034	$11.95	$10.45	$9.45
8m		WH3036	$11.95	$10.45	$9.45

Stainless Steel Conductive Thread 2m

A highly flexible thread made conductive by the inclusion of stainless steel strands. You can feel the extra weight that the stainless steel gives. The thread is a dark silvery grey, and is great for adding electrical elements to textiles such as fabric.

- Maximum current 500mA
- Tie onto modules and components to make a connection

	Cat.	Qty 1+
2m length	WW4100	$8.95

Sparkle Stitch Kit

This kit includes all it takes for anyone (even boys) to make illuminated theatrical - type masks and clothing using ultra bright LED's and batteries. Included in the kit is: lots of coloured felt on which to base your creations, a hot glue gun, conductive sewable thread, batteries, battery holders and LEDs, a 62 page electronics guide with patterns for light up masks, a multimeter, special sewing needles and other sewing accessories

Everything you need is in the kit except perhaps a good pair of scissors which your mum will undoubtedly have. So get started! This is your first step to becoming a famous theatrical designer! Oscars - here we come.

- Case dimensions: 330(L) x 220(D) x 120(H)mm

Make light up masks!

	Cat.	Qty 1+
Kit	KM1080	$79.00

3m EL Wire

Add amazing colourful lighting to your party, costume, signage, decorations, etc. These 3m long flexible wires can be bent into most shapes and glow (similar to a neon light) when power is applied. Power is provided using the compact EL controller (SL2440 sold separately), which runs off 2 x AA batteries, making it extremely versatile and portable.
At only 2.3mm diameter it can be easily stitched into clothing or fastened with cable ties. Excess length can be cut off to suit your application (note: can't be re-joined). Up to 3 x EL wires can be connected at the same time to the same controller using 2 or 3 way splitters (sold separately).
Requires SL2440 EL Wire Power Supply and Controller (sold separately)

		Cat.	Qty 1+	Qty 5+	Qty 10+
White		SL2442	$9.95	$8.95	$7.95
Red		SL2444	$9.95	$8.95	$7.95
Blue		SL2448	$9.95	$8.95	$7.95
Green		SL2446	$9.95	$8.95	$7.95

EL Wire Power Supply and Controller

Small enough to fit in your pocket or stitched into a costume, and can power up to 3 x EL wires using the splitters available separately. Features a pocket clip and a push button to switch between constant or two flash speeds.
Note: The controller circuit may emit a high pitch sound when in operation. This is normal due to the built-in inverter.

	Cat.	Qty 1+	Qty 5+	Qty 10+
EL Wire Power Supply	SL2440	$9.95	$8.95	$7.95

Splitter for EL Wire

Connects the SL2440 EL wire power supply and controller to multiple lengths of EL wire. Available in 2-way or 3-way versions with each outlet capable of connecting a full 3m length of EL wire*. Power supply/controller and EL wire lengths sold separately.
** Note: Overall light output will drop when using splitter with full 3m lengths compared to direct connection to power module. To maintain maximum light output the total length connected to the splitter needs to be under 5m.*

	Cat.	Qty 1+	Qty 5+	Qty 10+
2 Way Splitter for EL Wire	SL2441	$2.95	$2.65	$2.35
3 Way Splitter for EL Wire	SL2443	$2.95	$2.65	$2.35

For Microcontrollers

WHEELS & CHASSIS:

Making things that move is really exciting, but it can also be challenging to build. We make it easy by providing all the bits and bolts you need to make solid and rugged moving vehicles. Combined with other components, such as the Ultrasonic proximity sensor, motor driver and any one of the Arduino® range of boards, and your next weekend project could be an impressive intelligent buggy.

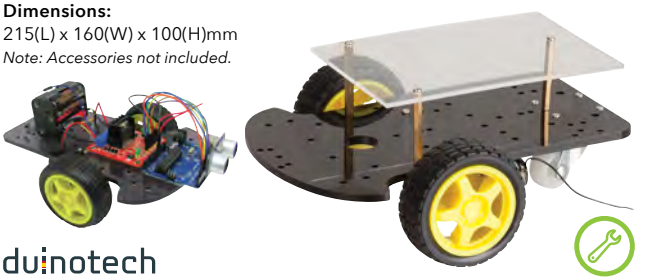
2 Wheel Drive Motor Chassis Robotics Kit

These two kits make creating your own robot easier than ever. The kit includes motors, wheels, tyres and two pre-drilled mounting plates. These kits are ideal for an Arduino® or pcDuino robotics project.

- Pre-Drilled mounting plates
- One motor + gearbox per wheel
- Motor voltage: 5-10VDC

Dimensions:
215(L) x 160(W) x 100(H)mm

Note: Accessories not included.



duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
KR3160	$39.95	$35.95	$31.95

DC Geared Motor with Rubber Wheel

DC geared motor with rubber wheel suitable for your Arduino® vehicle based/robotics applications. Also a suitable replacement for the 2WD (KR3160) and 4WD (KR3166) car chassis.

- DC motor: Working voltage 5-10VDC
- Gear ratio: 48:1
- 1 x plastic tyre wheel / 1 DC Gear Motor
- Bi axial can match speed encoder
- Convenient speed measurement
- Dimensions: 66(Dia.) x 28(W)mm

duinotech

Cat.	Qty 1+	Qty 5+	Qty 10+
YG2900	$9.95	$8.75	$7.75

6V Micro Motor with Mounting Bracket

This small gearhead motor with bracket suits robotics and other maker applications. It runs from 6VDC, travels counter-clockwise, and provides a 1:30 gear ratio with a rated speed of 600RPM. Micro wheels to suit are available separately (use YG2902). 0.5kg Torque.

Specifications	YM2800
Rated Voltage	6VDC
Voltage Range	5.4-6.6VDC
Gear Ratio	1:30
Rotation Direction	CCW
No Load Current	<35mA
No Load Speed	600RPM
Torque	0.5kg
Bracket Dimensions	26(W) x 12(H) x 12(D)mm
Motor Dimensions	37(L) x 13(W) x 10(H)mm

Cat.	Qty 1+	Qty 5+	Qty 10+
YM2800	$16.95	$14.95	$13.45

Micro Wheels Tyres

A pair of wheels to suit the YM2800 gearhead motors.

- 34mm in diameter
- Sold as a pair

	Cat.	Qty 1+	Qty 5+	Qty 10+
Sold as a pair	YG2902	$6.95	$6.25	$5.55

4 Wheel Drive All Metal Chassis Car Kit

An easy to build chassis kit with all metal construction. Supplied with four motors with wheels, and everything you need to build the frame. Multiple mounting points make it easy to mount your favourite sensors, such as the XC4442 Ultrasonic Sensor. A motor controller (XC4472), UNO microcontroller (XC4410) and 4 x AA batteries are available separately to get your 4WD robot in action.

Specifications	KR3166
Motor gear ratio:	1:48
Motor No-load speed:	125RPM
Motor torque:	0.8Nm
Weight:	760g
Dimensions:	260(W) x 210(L) x 65(H)mm

Cat.	Qty 1+
KR3166	$59.95

For Microcontrollers

STEPPERS & SERVOS:

Stepper and servo motors are used whenever you want to precisely control rotation or angular motion. Many DIY 3D printers utilise several stepper motors controlled by an Arduino® based controller. We have a wide range of stepper and servo motors to suit different applications.

5V Stepper Motor & Driver Set

A small and versatile motor and driver set. 5VDC stepper motor controlled by the ULN2003 driver can be used with any Arduino® or compatible board via jumper leads.

- 5VDC stepper motor
- Stepper motor size: 28mm diameter
- Step angle 5.625 x 1/64
- Reduction ratio 1/64
- LED indicators
- Driver board size: 35(L) x 32(W) x 10(H)mm

duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC4458	$9.95	$8.75	$7.75

Pan & Tilt Action Camera Bracket Mount for 9G Servos

This camera bracket mount is the easy way to add pan and tilt functionality to your next robot or Arduino® project. Add two 9G servos (YM2758) to complete assembly. The clips on the front are designed for an action camera to clip straight in. Or even mount an XC4442 Ultrasonic Sensor and create an Arduino® controlled sonar, or an XC4478 Accelerometer to create a levelling gimbal. Easy to assemble.

- Clamp for servo wires
- Servos not included
- Dimensions: 35 x 55 x 35mm (Assembled)

duinotech

Cat.	Qty 1+	Qty 5+	Qty 10+
XC4618	$4.95	$4.45	$3.95

9G Micro Servo Motor

Micro servo motor, perfect for use with XC4618 Pan and Tilt bracket. Small enough to connect directly to an Arduino® Board for experimenting.

- 3.5V- 6V Supply Voltage
- 500 degrees/second at 6V
- 1.6kg.cm at 4.8V
- Dimensions: 30 x 30 x 10mm
- Cable Length: 250mm

duinotech

Cat.	Qty 1+	Qty 5+	Qty 10+
YM2758	$11.95	$10.45	$9.45

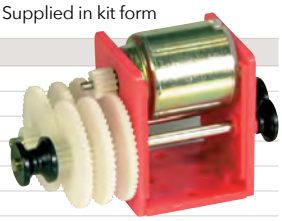
MOTORS & GEARBOXES

Low Cost Motor / Gearbox Set

This unit comes complete with a 3V 12,000 rpm motor*. It can be stepped down (with the consequent torque multiplication) up to six times as shown below. The motor is fitted with a 12 tooth pinion and the small gear cluster is 12 tooth. The large clusters are all 48 tooth. Not all gears need to be used. The intermediate output shafts are hardened steel, 3mm dia. Also supplied are press fit pulleys. The whole assembly snaps together. Hand tools are almost unnecessary.

**Motor can also be varied by changing input voltage but this lowers torque.*

- Motor cage - 40(H) x 25(W) x 28(D)mm
- Gearbox cluster - 40(W) x 25(D) x 30(H)mm
- Main & intermediate shafts - 63 x 3mm Dia. Supplied in kit form



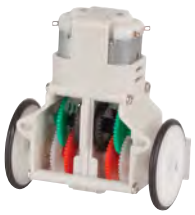
Specifications	RPM
12,000 x 12/48	3,000
3,000 x 12/48	750
750 x 12/48	187.5
187.5 x 12/48	46.875
46.875 x 12/48	11.72
11.72 x 12/48	2.93

Cat.	Qty 1+	Qty 5+	Qty 10+
YG2730	$14.95	$13.45	$11.95

Dual Motor Gearbox Kit

Great for simple robot and tank projects. Independent motors for skid-steer controls.

- Rubber tired wheel and crank arm options
- Mountings for horizontal and vertical use
- Three gear ratios included, can be changed by building with different gears from kit
- 1:60, 200RPM, 1:120, 100RPM, 1:288, 42RPM



Cat.	Qty 1+	Qty 3+	Qty 6+
KJ9029	$19.95	$17.95	$15.95

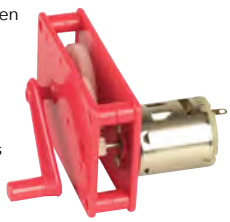
Tech talk

GEARBOX SPEEDS

Note: All DC motors and motor gearboxes can change speed to a considerable amount by changing voltage within specified limits. This reduces need for special gear ratios for your application.

Hand Crank Dynamo with Geared Motor

Here's a great gadget that will allow you to add Green power to any of your projects. What we have here is a hand crank dynamo, pre-assembled but easily modified to be retro-fitted to existing equipment or added to new projects. Crank the handle and the specially designed gear set will operate the motor and produce a DC voltage which can be used for a variety of low current uses (charging batteries, lights etc.). Crank slowly and the voltage is low, crank harder and the voltage is higher. Made from plastic - easy to re-work to fit your projects.



Cat.	Qty 1+	Qty 5+	Qty 10+
MD7000	$24.95	$22.45	$19.95

STEPPER MOTORS

12VDC 48 Step / 7.5° Stepper Motor

Standard 48 step / 7.5° design, with flange mount 3mm hardened steel shaft. Suitable for object control, numerical control etc.

1 YEAR WARRANTY

Specifications	YM2754
Rated Voltage	12VDC
Rated Current	1.1A/phase
Phases	4
Steps Per Revolution	48
Stepping Angle	7.5°
Drive Method	Unipolar chopper drive
Resistance Per Winding	20 ohms
Holding Torque	700g.cm

Cat.	Qty 1+	Qty 5+	Qty 10+
YM2754	$24.95	$22.35	$19.70

NEMA17 Stepper Motor

Two phase stepper motor with 1.8° ±5% per step.

Specifications	YM2756
Voltage	12VDC
Operating Current	1.7A per phase
Stepper Control	4 wire
Torque	54g/cm²
Holding Torque	40g/cm²

Cat.	Qty 1+	Qty 5+	Qty 10+
YM2756	$24.95	$22.45	$19.95

MOTORS

Standard DC Motors

THESE ARE NOT TOY MOTORS. Each motor briefly described below is a quality product with hardened drive shaft, sintered bearings and quality commutator brushes etc. They are ideal for any application where a compact high torque and reliable motor is required. Each motor is provided with a full data sheet which includes motor speed/torque/current/efficiency curves etc. Generous discounts for quantity purchases.

- 2.3mm driveshaft
- M2.6 threaded mounting
- Generously ventilated
- Solder tag terminals

YM2718

Specifications	YM2712	YM2716	YM2718
VOLTAGE (V)	6	12	12
NO LOAD			
Speed (rpm)	16,200	14,500	14,600
Current (A)	0.55	0.28	0.67
AT STALL			
Torque (g.cm)	191	372	1,200
Current (A)	5.6	5.21	17.2
AT MAX EFFICIENCY			
Efficiency (%)	49.6	66.1	55.1
Power (W)	5.96	5.56	26.5
Speed (rpm)	9,679	13,544	10,489
Torque (g.cm)	60	40	246
Current (A)	2.0	1.0	4.0
AT MAX POWER			
Speed (rpm)	7,845	8,266	9,304
Torque (g.cm)	80	160	326
Current (A)	2.6	2.4	5.0
DIMENSIONS (mm)			
Diameter	27.6 / 2.3	27.6 / 2.3	35.8 / 3.175
Total / Shaft Length	51 / 12.5	57 / 13	71 / 9.5
Mounting Thread Dia	2.6	2.6	3.0

RPM	Volt	Cat.	Qty 1+	Qty 5+	Qty 10+
16,200	6	YM2712	$8.50	$7.50	$6.75
14,500	12	YM2716	$9.95	$8.75	$7.75
14,600	12	YM2718	$18.95	$16.95	$14.95

Hobby Motors

Two models available. Ideal for hobbyist, experimenters, robotics and as replacements.

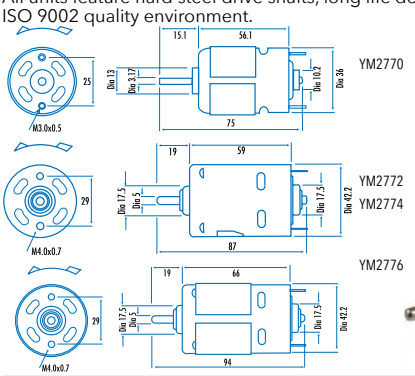
Specifications	YM2706	YM2707
Torque	Low	Medium
Operating Volts	1.5-4.5V	1.5-4.5V
Nominal Volts	3V	4.5V
Speed (No Load)	12000rpm	12500rpm
Current (No Load)	0.28A	0.25A
Speed (Max Eff)	8540rpm	9560rpm
Current (Max Eff)	0.69A	0.81A
Torque (Max Eff)	7.94gcm	17.86gcm
Diameter	20mm	23.6mm
Total Length	25mm	25mm
Shaft Length	8.1mm	6.5mm
Shaft Dia	2mm	2mm

	Cat.	Qty 1+	Qty 5+	Qty 10+
Low	YM2706	$3.50	$3.15	$2.75
Medium	YM2707	$4.95	$4.45	$3.90

MOTORS CONTINUED

Standard (High Power) DC Motors

High speed and power from these compact ferrite magnet type DC motors. All units feature hard steel drive shafts, long life design and are built in an ISO 9002 quality environment.



Specifications	YM2770	YM2772	YM2774	YM2776
VOLTAGE (V)	12	6	12	12
NO LOAD				
Speed (rpm)	11,800	20,000	18,800	9,700
Current (A)	0.8	4.0	2.6	1.3
Operating Range (V)	6-12	3-6	6-12	6-18
AT STALL				
Torque (g.cm)	2700	1910	4900	6000
Current (A)	26	67	92	57
AT MAX EFFICIENCY				
Efficiency (%)	76	57	71	73
Power (W)	43	45	107	52
Speed (rpm)	9800	13730	15520	8490
Torque (g.cm)	420	320	670	600
Current (A)	4.7	13.5	12.8	6.0
DIMENSIONS (mm)				
Diameter	36	42	42	42
Total / Shaft Length	75 / 15	87 / 19	87 / 19	94 / 19
Shaft Diameter	3.17	5.0	5.0	5.0
Mounting Thread	M3	M4	M4	M4

RPM	Volt	Cat.	Qty 1+	Qty 5+	Qty 10+
11,800	12	YM2770	$14.95	$13.45	$11.95
20,000	6	YM2772	$21.95	$19.45	$17.45
18,800	12	YM2774	$19.95	$17.95	$15.95
9,700	12	YM2776	$19.95	$17.95	$15.95

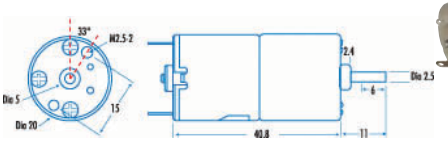
12VDC Reversible Gearhead Motors

The motors work equally well in forward or reverse motion. More specifications available on our website.

Specifications	YG2732	YG2734	YG2738
Torque G.cm	2100	12,000	50,000
Rated Voltage (Volts)	12.0V	12.0V	12.0V
Operating (Volts)	4.5 - 18Vmax	4.5 - 18Vmax	6 - 12Vmax
Current - No Load (Ma)	30	70	<450
Current - Full Load (Ma)	390	1380	14000
Gear Ratio	82:1	244:1	50:1
Shaft Speed (Rpm)	70	36	160

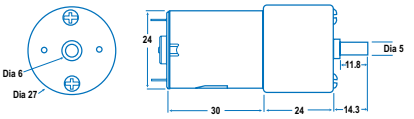
YG2732

This compact unit will give a massive 2.1 kg.cm of torque at 70RPM. Current draw rises to a modest 390mA.



YG2734

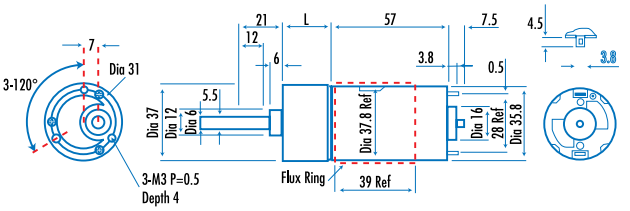
Only slightly larger than the unit above, but with a massive increase in torque at 36RPM. Ideal for driving wheels or other traction devices.



YG2738

For heavy duty applications.
Massive 50kgs torque at 55RPM

Specifications may vary



RPM	Volt	Cat.	Qty 1+	Qty 5+	Qty 10+
70	12	YG2732	$14.95	$13.35	$11.70
36	12	YG2734	$23.95	$21.35	$18.95
55	12	YG2738	$43.95	$38.45	$34.95

SERVOS

9G Micro Servo Motor

Micro servo motor, perfect for use with XC4618 Pan and Tilt bracket. Small enough to connect directly to an Arduino® Board for experimenting.

- 3.5V- 6V Supply Voltage
- 500 degrees/second at 6V
- 1.6kg.cm at 4.8V
- Dimensions: 30 x 30 x 10mm

p.A114
pan & tilt bracket to suit

Cat.	Qty 1+	Qty 5+	Qty 10+
YM2758	$11.95	$10.45	$9.45

Servo Motor - Standard 6V with Metal Gear

- High speed and high torque digital servos
- Dual ball bearing
- Metal gears for maximum strength and durability
- Operating Voltage: 4.8-7.2V
- Connector wire: 32cm
- Includes control horns and screw set
- Weight: 55g
- 40.7 x 19.7 x 42.9mm (standard servo size)

	Cat.	Qty 1+	Qty 5+	Qty 10+
Torque 4.8V 13kg.cm, 0.25 sec/60°	YM2763	$39.95	$35.95	$31.95
Torque 4.8V 11kg.cm, 0.20 sec/60°	YM2765	$39.95	$35.95	$31.95

Mini Servo 4.8V-6V

Mini sized servo perfect for remote control gadgets or robotics applications where size is at a premium.

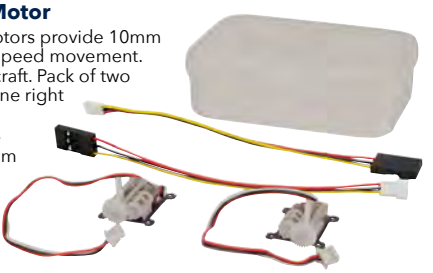
Specifications	YM2760
Dimensions	35(L) x 16.9(W) x 32(H)mm
Weight	26g
Torque 4.8V	3400g.cm
Transit Time 4.8V	0.19 sec/60°
Torque 6V	4200g.cm
Transit Time 6V	0.15 sec/60°

Cat.	Qty 1+	Qty 5+	Qty 10+
YM2760	$24.95	$22.45	$19.95

Micro Linear Servo Motor

These tiny linear servo motors provide 10mm of linear throw with high speed movement. Small and light for RC aircraft. Pack of two units- one left hand and one right hand

- 3.7V - 5V supply voltage
- Measures 22 x 15 x 12mm excluding leads
- 0.12s for full travel at 5V
- Worm drive for zero-power position holding



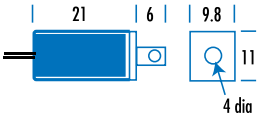
Cat.	Qty 1+	Qty 5+	Qty 10+
YM2748	$39.95	$35.95	$31.95

SOLENOIDS:

Range of DC & AC solenoids and actuators. Made to our factory Specifications. You can safely design them in knowing that they will be available over the long term. Generous quantity discounts.
See website for datasheets.

Ultra Miniature 12V

Small square frame unit, Pull type. Full data supplied with unit.

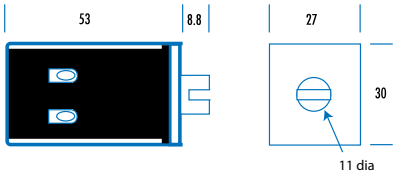


Specifications	SS0900
Coil Resistance	131Ω 10 watt (max)
Pulling Force	20 - 160g (25% duty cycle)
Stroke	0.5 - 4.0mm (25% duty cycle)
Total Weight	10g
Plunger Weight	2g

Cat.	Qty 1+	Qty 5+	Qty 10+
SS0900	$13.95	$12.35	$10.95

Standard 12V

Regular size square frame unit, Pull type, solder tip. Full data supplied with unit.

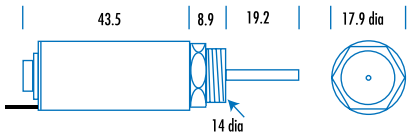


Specifications	SS0902
Coil Resistance	24Ω
Rated Power	6 watt
Pulling Force	200g-2kg (25% duty cycle)
Stroke	2.0 - 12mm (25% duty cycle)
Total Weight	205g
Plunger Weight	39g

Cat.	Qty 1+	Qty 5+	Qty 10+
SS0902	$34.95	$30.95	$27.95

Tubular 12V

Compact size, Push type. Full data supplied with unit.

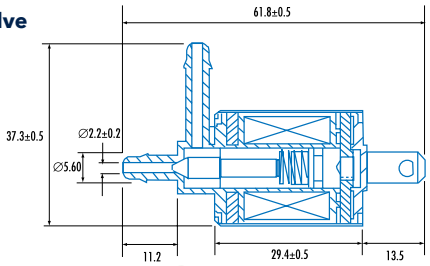


Specifications	SS0903
Coil Resistance	25.6Ω 20 watt @ 25% duty cycle
Pulling Force	220 - 940g (25% duty cycle)
Stroke	1.0 - 6.0mm (25% duty cycle)
Total Weight	81g

Cat.	Qty 1+	Qty 5+	Qty 10+
SS0903	$34.95	$30.95	$27.95

12VDC Solenoid Valve

Air valve solenoid, normally closed. Standard 1/4" Barb type hose fittings.



Specifications	SS0905
Operating Voltage	12VDC
Operating Current	350mA
Air Leakage	1cc/min maxat 4 PSI

Cat.	Qty 1+	Qty 5+	Qty 10+
SS0905	$29.95	$26.95	$23.95

TAMIYA POWER TRANSMISSION COMPONENTS

Single Motor 4 Speed Gearbox / Axle Assembly

This brand-new Tamiya product features an all plastic moulded gearbox and motor casing. Included is a FA-30 type 3 volt electric motor, axle with 2 crank arm and tube of grease.

These gear ratios are user selectable:

12.7:1 114.7:1
38.2:1 344.2:1

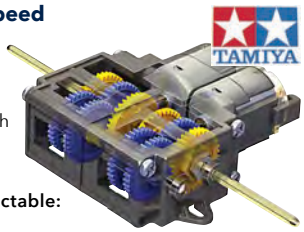
Cat.	Qty 1+	Qty 5+	Qty 10+
YG2740	$22.95	$20.45	$17.95

Double Motor Independent 4 Speed Gearbox / Axle Assembly

Basically a double version of the unit above. Each motor can be separately driven and therefore when wheels are connected could rotate on the spot. Each gearbox is independent so it is possible to set different gear ratios for each box. Includes 2 x FA-30 type 3 volt motors.

The following gear ratios are user selectable:

12.7:1 38.2:1
114.7:1 344.2:1

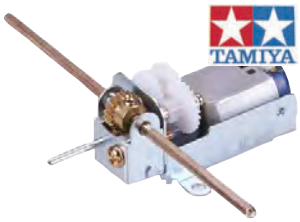


Cat.	Qty 1+	Qty 5+	Qty 10+
YG2741	$26.95	$23.95	$21.45

2 Shaft Universal Motor / Gearbox Set

This gearbox has a main output shaft exiting either side of the gearbox (to drive wheels, for example) and another single-ended shaft at 90° to the former. The gear set can be configured to give 3 set speeds.

- Metal chassis, includes motor



Cat.	Qty 1+	Qty 5+	Qty 10+
YG2742	$22.95	$20.45	$17.95

Pulley Set

This set would typically be used to transfer power in small energy systems. Set includes 2 x each 50 & 25mm pulleys, 2 x 11mm pulleys, bushings, screws, nuts and 1 metre of rubber drive band. This type of system will absorb transmission shock.

Cat.	Qty 1+	Qty 5+	Qty 10+
YG2869	$14.95	$13.45	$11.95

GERMAN MADE. These precision engineered components are a delight to play with. They offer solutions to small power transmission problems. We make no apologies for the price because well, they are German and they are magnificent quality.

Solid Shaft Couplers (Female)

Machining from solid brass stock – 16mm long, 12mm diameter. Type I will connect 2 shafts on a common axis. Type II will reduce from 6.0 diameter to 4.0 diameter.

- Shaft fixed with grub screws

	Cat.	Qty 1+	Qty 5+	Qty 10+
Type I - 6mm Dia. to 6mm Dia.	YG2600	$11.95	$10.45	$9.45
Type II - 6mm Dia. to 4mm Dia.	YG2602	$11.95	$10.45	$9.45

Aluminium Hub with Set Screws

This device will accept a 6.35mm (1/4") shaft, set screw fixed, and connect to the flat face of a gear, typically the flat side of the larger 48 pitch gears.

- Coupling from the gear to the hub by 4 x set screws provided. Enables a motor to be securely fastened to a driving gear
- Hub 7/8" (22.5mm) dia

Cat.	Qty 1+	Qty 5+	Qty 10+
YG2784	$9.95	$8.95	$7.95

WHEEL ACCESSORIES

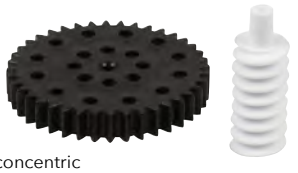
Gear Set & Spur Gear Set

Gear set contains one pinion gear and two different sizes of radio gears. Spur gear set contains three different spur gears.

	Cat.	Qty 1+	Qty 5+	Qty 10+
Gear Set	YG2630	$12.95	$11.45	$9.95
Spur Set	YG2632	$11.95	$10.45	$9.45

Worm Drive Set

This set consists of a worm gear 24mm long x 12mm dia with an 8 turn worm screw. The worm has a 2.8mm axle hole which could probably be carefully drilled out to a larger diameter. The spur gear is 1/4" (6.35 wide) and 1 & 5/8" (41.2mm) diameter with a number of regular pitch-concentric 2.8mm holes across the face of the gear including one dead centre. It would be drilled out to accommodate a larger shaft. This gear has 40 teeth. Both are moulded in an engineering grade plastic.



	Cat.	Qty 1+	Qty 5+	Qty 10+
	YG2736	$9.95	$8.75	$7.75

2mm Male & Female Gold Connector Charger Leads

A range of charger, power and test cables with banana plugs, alligator clips and JST connectors, commonly used for toys, robotics, models, remote control hobby. Supplied with one red and one black quick connect 2mm wire set. Ideally used in battery packs or any other applications where good connection is required but can be easily and quickly removed.

- 1 x 2mm female gold connector, 20AWG silicone wire
- 1 x 2mm male gold connector, 20AWG silicone wire
- Both approx 100(L)mm each

	Cat.	Qty 1+	Qty 10+	Qty 50+
	WC6018	$5.95	$5.35	$4.75

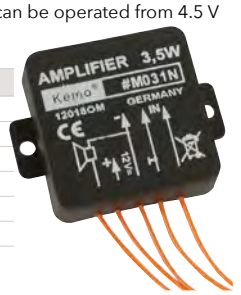
PRE-ASSEMBLED MODULES

Universal Amplifier Modules

1 CHANNEL 3.5 WATT

Ideal as a bench-test amplifier for audio sources, or even as a mono headphone amplifier, this small audio amplifier can be operated from 4.5 V up to 12 VDC. Use two for stereo.

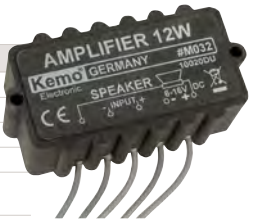
Specifications	AA0223 - 3.5 WATT
Output Power	3.5 W (max)
Operating Voltage	4.5 to 12 V
Speaker Impedance	4-16 ohms
Input Sensitivity	< 80mV
Frequency Response	40Hz-20kHz
Dimensions	30 x 25 x 15 mm



1 CHANNEL 12 WATT

Small audio amplifier module is suitable for a number of purposes and has a range of suitable input voltages and load impedances.

Specifications	AA0225 - 12 WATT
Operating Voltage	6V - 16V, 800mA (max)
Output Power	12W (max) into 4-16 ohms
Frequency Range	40Hz-20kHz
Input Sensitivity	80mV
Dimensions	40 x 40 x 12mm excluding mounting holes



	Cat.	Qty 1+	Qty 2+	Qty 4+
3.5W	AA0223	$29.95	$26.95	$23.95
12W	AA0225	$34.95	$30.95	$27.95

Mono Amplifier Module

This tiny module uses the LM386 audio IC, and will deliver 0.5W into 8 ohms from a 9V supply making it ideal for all those basic audio projects. It features variable gain, will happily run from 4-9VDC and its small size allows it to fit into tight spaces.

Specifications	AA0373
Power	4 - 9VDC
Dimensions	65(L) x 35(W) x 20(H)mm

	Cat.	Qty 1+	Qty 2+	Qty 4+
	AA0373	$7.95	$7.15	$6.35

Multi-Voltage Regulated Adaptor Module (Stepdown)

Ideal for when you need a reliable voltage source for a portable CD player or similar battery-powered device. Another use for this adaptor is for a peripheral computer power supply to power external Blu-Ray drive, powered speakers, modems, etc. Plug the input into your PC's internal power supply cable and get selectable regulated voltage out from 3 to 15VDC*. Output current capability is around 1.5 amps.

- Dimensions: 63(L) x 24(Dia.)mm

*Note: *Input voltage MUST be larger than the required output voltage.*

	Cat.	Qty 1+	Qty 3+	Qty 6+
	AA0372	$12.95	$11.45	$9.95

3 Amp 24V to 12V Reducer

Many trucks and boats use 24V systems. These converters will allow you to run a reasonably sized 12V car-stereo or other devices from a 24V supply. Heatsink (not included) should be used for superior performance.

Specifications	AA0266
Short-Circuit Protection	Thermal cutout
Input Voltage	24 to 26VDC
Output Voltage	12VDC
Maximum Load	3A
Dimensions	135(L) x 50(W) x 24(H)mm
Heatsink	50 x 100 x 30mm (rec. size) use Cat. HH8572 or similar

	Cat.	Qty 1+	Qty 3+	Qty 6+
	AA0266	$29.95	$26.95	$23.95

DC to DC Converter Modules

1 YEAR WARRANTY

Converter modules that can step-up or step-down voltages so you can power your devices where a different power source is present. This could include powering 12VDC devices from a 6VDC motorbike battery or to run 12VDC devices from a 24VDC battery found in trucks. They feature protection against short-circuits, overload and over-heating.
See our website for datasheets.

2 models to choose from:
DC To DC Step Down Module AA0236
DC To DC Step Up Module AA0237

AA0236 AA0237

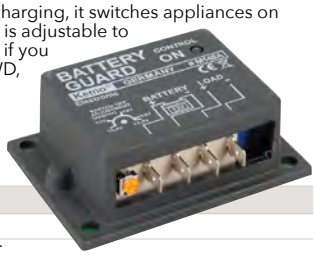
Specifications	AA0236	AA0237
Input Voltage	6-28VDC	6-14VDC
Output Voltage	3-15VDC	11-26VDC
Max Output Current	1.5A	2A
Dimensions	60(L) x 45(W) x 20(D)mm	70(L) x 60(W) x 23(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Step Down - 1.5A	AA0236	$24.95	$22.35	$19.70
Step Up - 2A	AA0237	$29.95	$26.95	$23.70

PRE-ASSEMBLED MODULES CONTINUED

Battery Discharge Protector

Protects your car battery from total discharge by switching off appliances before the battery voltage drops to an unrecoverable level. When battery voltage is re-established by recharging, it switches appliances on automatically. The interrupting voltage is adjustable to 13.3 VDC. Essential low-cost insurance if you have a dual battery setup in a boat, 4WD, RV or for an alternative energy system such as solar or wind power.



Specifications	AA0262
Max. Switching Current	12V / 20A
Interrupting Voltage	10.4 - 13.3VDC
Resetting Voltage	approx. 0.8V (+/-0.3V) above interrupt voltage
Current Consumption	< 0.7mA when OFF, < 1.6mA when ON
Dimensions	87(L) x 60(W) x 32(H)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
AA0262	$46.95	$41.95	$36.95

Speedo Corrector Module for Cars

When you modify your gearbox, diff ratio or change to a large circumference tyre, it may result in an inaccurate speedometer. This module alters the speedometer signal up or down from 0% to 99% of the original signal. With this improved model, the input setup selection can be automatically selected and it also features an LED indicator to show when the input signal is being received.

- Power: 12VDC
- Dimensions: 63(L) x 46(W) x 25(H)mm

Cat.	Qty 1+	Qty 4+	Qty 10+
AA0376	$49.95	$44.95	$39.95

Frequency Relay Module for Cars

It uses a standard tacho, road speed, or many other pulse outputs to switch a relay. The switch frequency can be set to trip when it is rising or falling, and it features adjustable hysteresis (the difference between trigger on/off frequency). You could configure it to trigger water spray cooling on deceleration, shift light activation, adjustable aerodynamics based on speed, intake manifold switching and much more.

- Dimensions: 72(L) x 65(W) x 43(H)mm

Cat.	Qty 1+	Qty 4+	Qty 10+
AA0377	$44.95	$39.95	$35.95

12 Volt Twilight Switch

This handy module senses the ambient light level and will switch external devices on/off at night and in the morning. The unit operates from 12VDC and its changeover contacts are rated at 25VDC @ 3A. Power consumption is only 2mA so it is ideal for automotive or battery-driven applications. Use it for garden lighting or security applications etc.

- Dimensions: 72(L) x 50(W) x 32(H)mm

Cat.	Qty 1+	Qty 10+	Qty 25+
AA0323	$34.95	$30.95	$27.95

12V 3A Timer Module 2 Seconds to 23 Minutes

A versatile and useful timer module that can be set for periods of 2 seconds to 23 minutes. The start and stop functions are controlled by simple switch inputs and the relay output can control a device of up to 25V 3A.

Specifications	AA0364
Operating Voltage	12 - 15VDC
Current Consumption	20mA/80mA (Relay off/on)
Relay Point	Single pole, 25VDC, 3A
Time Adjustment	2 sec to 23 min (+/-30%)
Dimensions	87(L) x 60(W) x 33(H)mm

Cat.	Qty 1+	Qty 4+	Qty 10+
AA0364	$39.95	$35.95	$31.95

12VDC 8A Dimmer/Motor Speed Controller

DC speed controllers are ideal for slowing down pumps and motors or dimming lights, but some use resistance circuits or rheostats which are very inefficient. The pulse width modulation (PWM) used in this controller allows you to vary the output from 0 to 100% while maintaining a very high efficiency. When used on motors this ensures full torque is available at very low speed and the motor won't shudder at start-up. Operates on any 12VDC system and capable of controlling devices rated at up to 8 amps.

- Internal circuitry is fully potted & the control potentiometer is splash proof making this suitable for marine environments and other harsh conditions
- Dimensions: 97(L) x 46(W) x 47(H)mm

		Cat.	Qty 1+	Qty 3+	Qty 6+
12VDC	8A	MP3209	$39.95	$35.95	$31.95

Mains Motor & Lamp Controller

This module can be used for various mains rated applications including lamp dimming, soldering iron temperature adjustment and universal commutator motor speed control. Features a 600W continuous and 1200W peak loading capacity with adjustable potentiometer control. Please note: fluorescent, quartz and energy saving lamps, and motors with starting capacitors should not be used with this module.

- Knob included.

Specifications	AA0346
Continuous Power	600W
Maximum Power	1200W
Dimensions	62 x 35 x 21mm

Please note that this kit operates on 240VAC mains voltage and you should be extremely careful when using these voltages. If in doubt, have an electrician check your work before applying power.

Cat.	Qty 1+	Qty 5+	Qty 10+
AA0346	$49.95	$44.95	$39.95

Programmable Interval 12V Timer Module

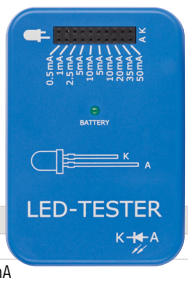
An easily programmed low cost electronic timer. It operates from 12VDC, with low current drain: <50mA when relay is on, <5mA when relay is off. It is link programmed for either a single ON timing period, or continuous ON/OFF cycling and can be link programmed for any of 48 different time periods, separately for ON time and OFF time. Selectable periods are 1/2/3/4/5/6/7/8/10/20/30/40/50/60/70/80 seconds, minutes and hours. It may be restarted at any time simply by pressing the reset push button.

Specifications	AA0378
Power	12VDC
Dimensions	72(L) x 65(W) x 43(H)mm

Cat.	Qty 1+	Qty 4+
AA0378	$39.95	$35.95

LED Tester

With this basic but essential tool it is possible to check the function, brightness, colour and polarity of most kinds of light emitting diodes (LED). The LED to be tested plugs into the front panel, at the current you wish to test it with. Two 10mA positions have been included on this multi-LED tester so that comparisons between two LEDs can be made simultaneously.



Specifications	AA0274
Operating Voltage	9V battery required
Test Currents	1mA, 2.5mA, 5mA, 10mA, 20mA, 50mA
Dimensions	58(L) x 44(W) x 25(D)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
AA0274	$13.95	$12.35	$10.95

Find Out More In Store

Our staff offer friendly and helpful service. We're here to help.

SNAP-ON PROJECTS & KITS:

These kits allow children 6 years and older to learn about electronics whilst having fun. All of the brightly coloured parts simply snap together without any need for screws or soldering. The parts can be easily taken apart to be reused for other experiments over and over again.

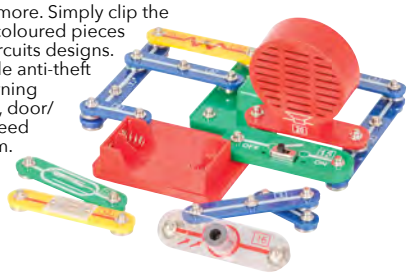
- Suitable for ages 6+
- No tools or soldering required
- Powered by AA batteries (Sold separately)
- Include coloured instruction manuals

STEM

Burglar Alarm Snap-On Electronic Project Kit

Create burglar alarms and more. Simply clip the clearly marked and bright coloured pieces together to learn various circuits designs. Some of the projects include anti-theft alarm that fires themed warning sounds when circuit breaks, door/window alarm using a dry reed switch and even a rain alarm.

- Requires 2 x AA batteries



Cat.	Qty 1+	Qty 3+	Qty 6+
KJ8974	$19.95	$17.95	$15.95

14-in-1 Snap-On Electronic Project Kit

Various experiments on circuits, motors, switches and more. Some of the projects include lamps and fans in both series and parallel circuit with variable controls; there is also a flying saucer project that really flies.

- Learn whilst building 14 electronic experiments
- Requires 2 x AA batteries

Cat.	Qty 1+	Qty 3+	Qty 6+
KJ8976	$16.95	$14.95	$13.45

Car & Boat Snap-On Electronic Project Kit with 50 Experiments

Simple snap together project kit allows you to create a car or a boat that will move! Bright colour pieces and no need to screw, or use adhesives. Great little kit for teaching simple electronic principles to eager minds. Projects include magnet controlled lamp or fan, air propelled car, and underwater or air propelled boat.

- Learn whilst building over 50 electronic experiments
- Requires 2 x AA batteries
- Suitable for ages 6+

Cat.	Qty 1+	Qty 3+	Qty 6+
KJ8972	$39.95	$35.95	$31.95

Electronic Project Snap-On Kit with 80 Experiments

Features 80 projects which demonstrate various theories of electronics. A great educational tool for primary age school students that will stimulate their neural pathways as they read and construct an array of devices that use circuits, switches, electric motors, LEDs and more. Some of the projects include magnets or switch controlled electric fans, switch controlled LEDs, switching multi-directional electric motor, sound effect machine that will output machine gun fire, police car siren and much more.

- Learn whilst building over 80 electronic experiments
- Requires 2 x AA batteries

Cat.	Qty 1+	Qty 3+	Qty 6+
KJ8970	$29.95	$26.95	$23.95

698-in-1 Snap-On Electronic Project Kit

This massive experimenters kit guides you through 698 different experiments. Yes, that's correct - 698 different experiments! It uses a unique baseboard and snap-together system so you can explore the world of electronic circuits without any tools, soldering, or experience! Build a light sensitive alarm clock, an electronic birthday candle, an electronic organ, and so much more. All using low voltage battery power, so it's safe for ages 8+. Requires 4 x AA batteries, not supplied.

- Snap together - no tools required
- 698 different experiments
- Battery: 4 x AA batteries (not included)
- Dimensions: 460(L) x 301(W) x 55(H)mm
- Weight: 860g
- Safe for 8+

Cat.	Qty 1+	Qty 3+	Qty 6+
KJ8985	$59.95	$53.95	$47.95

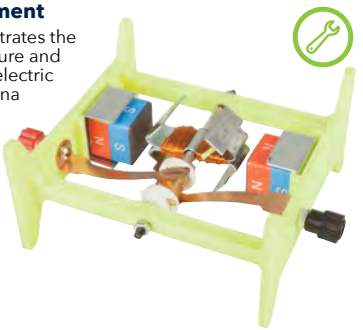
ELECTRONIC PROJECTS FOR KIDS

Mini Electric Motor Experiment

This simple motor model demonstrates the basics of how the magnets, armature and commutator work together in an electric motor to cause rotation. The banana plugs allow simple connection of a power source.

Removeable and reversible magnets to allow the effects of magnetic field to be seen

- Open structure to see all moving parts
- Magnetic poles marked on magnet
- Removeable armature



Cat.	Qty 1+	Qty 3+	Qty 6+
KJ9032	$14.95	$13.45	$11.95

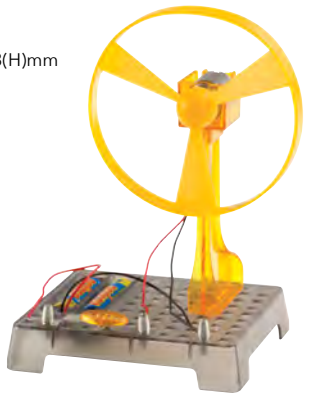
12-in-1 Electrical Experiment Kit

12 different experiments to construct that demonstrate various electronic principles. Learn about static electricity, electric motors, resistors, diodes, lights, solar power and more. Kit includes a manual with excellent information describing the theory and history associated with each experiment. Suitable for ages 8+.

- Assembly time for each experiment: Approximately 10 mins
- Requires 2 x AA batteries
- Base dimensions: 120(L) x 99(W) x 23(H)mm

ACTIVITIES:

- Static Electricity
- Conductors and insulators
- Make a fan
- Resistor
- Diode
- Make a light
- Make a Morse code machine
- Light control alarm
- Make a bell
- Make an electromagnet
- Make a motor
- Solar power cell



	Cat.	Qty 1+	Qty 3+	Qty 6+
12-in-1	KJ8919	$29.95	$26.95	$23.95

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ELECTRONICS CIRCUIT PROJECTS

MakeBlock Neuron Inventor Kit

Makeblock have assembled the essential package to get you started. The Neuron Inventors Kit contains 8 programmable electronic building blocks including power, sound, light and sensors. The building blocks are connected via snap magnetic Pogo Pins making them durable and effortless to use. Combine this with the intuitive graphical programming turn your ideas into real, working gadgets.

Make a new invention in just 5 minutes. The Inventors Kit includes 10+ invention ideas and online video guides. Follow, then lead with your own creative ideas. The invention ideas have case materials to help build out the invention, so the gadget is fun and looks great. Some of the invention ideas for you to build are below. See website for full parts list.

- Telegraph
- DJ Machine
- Peace Maker
- Light Pallet
- Singing Glass
- Electric Guitar
- Noisy Robot
- Biting Dinosaur
- 3 Night Lamp
- Happy Rabbit
- Tail Wagging Cat Robot

Peace Maker Project

	Cat.	Qty 1+
Makeblock Neuron Inventor Kit	KJ9190	$99.00

Squishy Circuits Standard Kit

Squishy Circuits uses conductive and insulating play dough to teach the basics of electrical circuits, a perfect blend of play and learning! The play dough kits, projects, and recipes teach problem solving and engineering concepts and inspire creativity and independent thinking.

The standard kit includes everything you need to get started with some more advanced Squishy Circuits projects that use LEDs, buzzers, and insulating dough!

Check our website for full list of contents.

	Cat.	Qty 1+
Standard Kit	KJ9350	$39.95

Squishy Circuits Deluxe Kit

Squishy Circuits uses conductive and insulating play dough to teach the basics of electrical circuits, a perfect blend of play and learning! The play dough kits, projects, and recipes teach problem solving and engineering concepts and inspire creativity and independent thinking.

The Deluxe Squishy Circuits kit comes with pre-made doughs so you can start circuit building right away! This kit also includes a deluxe battery holder which has a knob that allows your lights to blink and buzzers to beep at different speeds. Check our website for full list of contents.

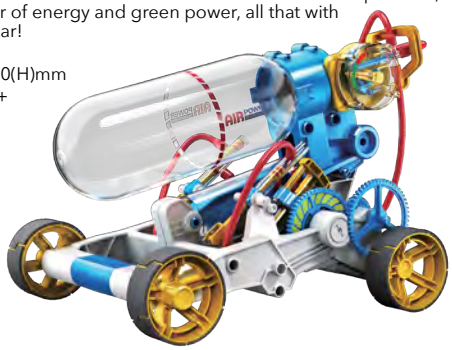
	Cat.	Qty 1+	Qty 3+
Deluxe Kit	KJ9352	$129.00	$115.95

CONSTRUCTION KITS

Air Power Engine Car Kit

A green powered car! No batteries or motors required and it is not even subject to weather conditions like its solar powered counterparts. This futuristic car kit operates entirely using air, and it travels up to 80m on one single tank. This kit balances the fun and learning perfectly. A built-in hand pump with pressure meter is built in the car for easy operation and also as an indicator in measuring how volume of air is collected into the tank. Build this fun and educational kit and discover and learn about air pressure, pumps, valves, transfer of energy and green power, all that with the thrill of a speedy car!

- Dimensions: 190(L) x 160(W) x 290(H)mm
- Suitable for ages 10+



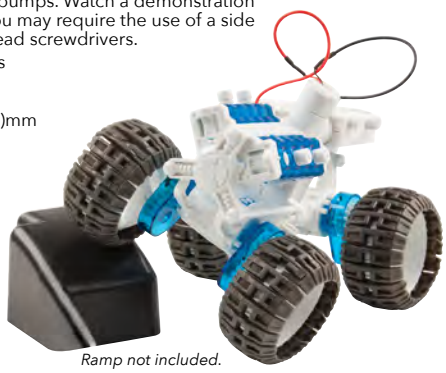
STEM

Cat.	Qty 1+	Qty 3+	Qty 6+
KJ8967	$29.95	$26.95	$23.95

Salt Water Fuel Cell Engine Car Kit

An entertaining educational kit demonstrating the concept of a salt powered automotive engine. It gives the next generation a look at alternative means of propelling cars of the future. It works with a combination of salt water and magnesium plates. When salt water is added it dissolves the magnesium to form hydrogen which is attracted to the cathode creating a flow of electrons. A detailed step by step assembly manual for connecting the myriad of components is included and the car engine can be configured as a V8 or flat engine. The cylinders also move up and down as the car moves forward. The finished vehicle is 4 wheel drive and the body will twist as it navigates its way over small pebbles and bumps. Watch a demonstration video on our website. You may require the use of a side cutter and flat/Phillips head screwdrivers.

- Assembly time: 3 hours
- Suitable for ages 8+
- Dimensions: 120(L) x 100(W) x 91(H)mm



STEM

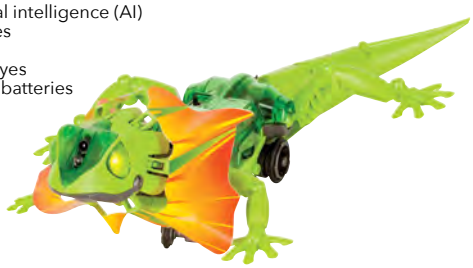
Ramp not included.

	Cat.	Qty 1+	Qty 3+	Qty 6+
Salt Water Fuel Cell Engine Car Kit	KJ8960	$28.95	$25.95	$22.95
Spare Cartridge	KJ8961	$7.95	$7.15	$6.35

Frilled Lizard Robot Kit with IR Sensor

A super smart frilled lizard with artificial intelligence. It has an infrared sensor that is programmed to 'escape' or 'follow-me'. Once the infrared sensor is activated in the 'escape' mode the robot will automatically act shocked by spreading its frill, dropping its jaw, illuminates its bicolour LED eyes and will scamper away from you until it reaches a safe place. If the infrared sensor is switched to the 'follow-me' mode using the 2 way function switch, then the robot will assess danger by bluffing the attacker (unfurling and shaking its frill). When the robot does not sense danger it will proceed to follow you like a pet lizard. Suitable for ages 10+.

- Interactive artificial intelligence (AI)
- Two funway modes
- Infrared sensor
- LED illuminated eyes
- Requires 4 x AAA batteries
- Dimensions: 370mm long



Cat.	Qty 1+	Qty 3+
KJ8968	$39.95	$35.95

CONSTRUCTION KITS

Crossbow Construction Kit

This toy crossbow has a firing lever that releases the lock and fires a dart when pressed! Adjust the distance knob to control how far back the arms are pulled before release and height knob to control how high up the Crossbow™ is aimed before firing. Features two alternate builds for more robotic fun!

- Suitable for ages 14+

Caution: Do not aim at eyes or face. To Avoid Injury: Use only projectiles designed for this product. Do not modify projectiles or projectile launcher.

	Cat.	Qty 1+	Qty 3+	Qty 6+
	KR9268	$24.95	$22.45	$19.95

Catapult Construction Kit

Inspired by ancient Greek and Roman designs, this modern Catapult has a ratcheting winch that can control the distance projectiles are thrown. Crank the winch to its maximum tension, and hurl balls over 3 metres! The VEX Robotics Catapult feature two alternate builds for more robotic fun!

- Suitable for ages 14+
- 3 ammo balls included
- Dimensions: 255(H)x230(L)x125(W)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
115 Piece	KJ8969	$29.95	$26.95	$23.95

Mini Space Rail Coaster Kit

Build your own marble rollercoaster, in whatever shape you like! The spiral "elevator"; lifts the marbles up to the top of the rail, and gravity takes care of the rest. It's entertaining, and a great lesson in physics. If you don't get the angles of the track right, the marbles won't make the journey! Hours of entertainment, and virtually unlimited track possibilities! Once you get it right though, they'll keep going around and around until you stop them (usually to make changes to the track)! Supplied with loads of pieces (170 in total) to make a 5m running track.

- Suitable for ages 15+

Specifications	KJ9004
Batteries	1 x C required (not included)
Track Length	5m

	Cat.	Qty 1+	Qty 3+	Qty 6+
170 Piece	KJ9004	$29.95	$26.95	$23.95

Planetarium Educational Kit

What better way to learn about our own Solar System than leaving your own marks on each of the planets? Assemble your own planetarium model, paint it and add highlights to create a glow effect. Watch the 30cm model glow in the dark - it's out of this world! Featuring the Sun, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune (our condolences to Pluto).

- Snap to build, no glue required at all
- Dimensions: 220(L) x 170(H) x 60(D)mm
- Suitable for ages 3+

	Cat.	Qty 1+	Qty 3+	Qty 6+
	KJ8994	$9.95	$8.75	$7.75

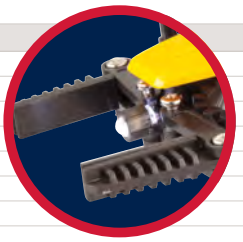
ROBOTIC CONSTRUCTION KITS

Robot Arm Kit with Controller

STEM

This arm is a must for budding robot enthusiasts and operates just like the real thing. It is capable of 5 separate movements and can easily perform complex tasks. Individual control is available for opening and closing the illuminated gripper plus control of wrist, shoulder, elbow and base rotation. The arm is supplied as a kit of parts and makes an excellent project for anyone interested in robotic construction basic electrical connections.

- Suitable for ages 12+



Specifications	KJ8916
Max Lift Capacity	100g
Gripper Opening	43mm
Maximum Reach	320mm
Wrist Movement	120°
Elbow Movement	300°
Shoulder Movement	180°
Base Rotation	270°
Requires	4 x D cells
Base Dimensions	225(L) x 160(W) x 40(H)mm

USB INTERFACE KIT FOR KJ8916

Add computer control via USB to your Robotic Arm. The kit includes everything you need - interface cable, pre-built PCB, enclosure and software for controlling function. You can use a keyboard or mouse to have real-time control of the robotic arm, or you can program, edit and load individual functions and movements, just like a real industrial robot. The commands are saved just like a normal computer file to be loaded and used later.

	Cat.	Qty 1+	Qty 3+	Qty 6+
Robot Arm with Controller	KJ8916	$69.95	$62.95	$55.95
USB Interface Kit	KJ8917	$49.95	$44.95	$39.95

R/C Robot Construction Kit

This impressive remote controlled robot construction kit is a thrill to build, and even more fun to control. It is supplied with 408 pieces, including two motors, LED lights, wireless receiver, and a battery box. A 40-page full colour manual is included to guide you step-by-step through the build, which takes about 1 to 2 hours to complete. A 2.4GHz full function remote control is supplied to control the direction from up to 10m away. Drive forward, backward, left, right or spin 360° on the spot, and at the touch of a button, you can also illuminate the LEDs in the eyes, lift the eyes up and down, turn the head, swing the arms, and rotate the hands. You are not limited to just the one robot design either. With a little imagination, you can also use the parts (and parts from other popular plastic block sets) to make your own custom robot. Batteries are not included. 3 x AAA are required for the remote, and 6 x AA for the robot, which provides up to an hour of continuous playtime. Recommended for ages 6+. Dimensions: 215(H) x 150(W) x 80(D)mm (Constructed)

STEM

	Cat.	Qty 1+	Qty 3+	Qty 6+
	KR9238	$69.95	$62.95	$55.95

ROBOTIC CONSTRUCTION KITS CONTINUED

3-in-1 All Terrain Tracked Robot

There are a lot of parts to assemble in this kit, including the hard-wire remote control. You do, however end up with a fantastic piece of robotic gear. It is primarily a terrestrial 6 track (i.e. 3 separate tractor-crawlers each side) unit. The crawlers can be reconfigured to operate as grippers, or even as a forklift type mechanism. You will need lots of time to put this thing together, but it will be a pleasure as the 50 page instruction manual is superb with dozens of good old-fashioned line drawings, which are still the best for clarity. There is very little electronics (indeed none really) but a tremendous amount of mechanical assembly. Electric motors are included.

This kit could form the basis of a sophisticated robotic platform with the addition of feedback systems, much of which is in the Jaycar catalogue.

- It would make a fabulous gift for a very bright 13+ year old
- Batteries AA x 4 are extra
- Carton dimensions 40(W) x 30(D) x 90(L)mm

STEM

	Cat.	Qty 1+	Qty 3+	Qty 6+
3-in-1 All Terrain	KJ8918	$69.95	$62.95	$55.95

2.4GHz R/C Robotic Arm Kit

NEW

Learn about robotics with this fun to build remote controlled robot arm kit. Once assembled, have fun driving it around the house to pick up and deliver objects to different rooms. The tank-like tracks help it drive across different surfaces and obstacles, and the articulating arm with claw rotates and extends to pick up even the smallest of objects. The remote control has a range up to 30m, and requires 3 x AAA batteries (sold separately). The robot features a rechargeable battery that provides up to 1 hour of playtime. To charge, simply connect it to an available USB power source using the supplied USB charging cable. 81 piece kit with build instructions. Ages 8+.

- Forward, Reverse, Left, Right, Spin, Arm Up, Arm Down, Clamp Pickup
- Includes 1 Remote Control, 1 x USB Charger

STEM

Specifications	KJ8988
Remote	2.4GHz
Batteries	Robot: Li-Po rechargeable inclued Remote: 3 x AAA batteries (sold separately)
Dimensions	420(H) x 260(L) x 195(W)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
81 Piece	KJ8988	$129.00	$115.95	$102.95

Tobbie Hexapod Robot Kit

Tobbie is the new 6-legged robot that you can build. He can walk and spin in any direction, and will beep and flash his eyes while moving around.

- Follow me mode
- Explore mode
- Six legs for stable walking

STEM

	Cat.	Qty 1+	Qty 3+	Qty 6+
	KJ9031	$49.95	$44.95	$39.95

Tobbie the Robot II Kit to suit micro:bit

The excellent features of micro:bit has been comprehensively interfaced into this robot, making Tobbie II your coolest and cleverest friend. Using MakeCode or Python editors, coding and programming is made easy and turns Tobbie II into a fantastic learning option for your STEM curriculum.

- Batteries: Requires 4 x AAA batteries
- Dimensions: 176(H) x 135(W) x 135(D)mm (Assembled)

Note: micro:bit not included (use XC4324).

p.A112 micro:bit V2 to suit

STEM

	Cat.	Qty 1+	Qty 3+	Qty 6+
	KR9260	$59.95	$53.95	$47.95

Mini Smart Car Robot Kit to suit micro:bit

A fun to build robot that uses a micro:bit microcontroller board (sold separately) that kids can code or control using their Smartphone via Bluetooth. The kit is easy to assemble and no soldering is required. The included infrared and ultrasonic modules connect with the micro:bit, which enables the robot to follow a line, avoid or follow obstacles, and more. Other features include an onboard buzzer to produce sounds, an 18 RGB LED ring for amazing colour effects, and a photocell to detect light intensity. Two large RGB lights on the front are used to indicate the robot's direction as it travels. Once kids are competent using the micro:bit, they can create their own code to get the robot to use the micro:bit's accelerometer, compass, and 5x5 LED matrix. A 3.6V Li-ion rechargeable battery is required for power (sold separately)

Note: micro:bit not included (use XC4324).
3.6V Li-ion rechargeable battery also required (use SB2298)

Included:

- 1 x Smart Robot Shield Base
- 1 x Ultrasonic Sensor Module
- 1 x Round LED Module
- 2 x Wheels
- 1 x Screwdriver
- 1 x USB Cable
- 3 x 100mm Jumper Wires
- 4 x 150mm Jumper Wires
- 1 x Omnidirectional Wheel
- 4 x Copper Pillars
- 3 x Acrylic Mount Boards
- Screws and Nuts

Dimensions: 120(D)x115(H)x115(W)mm

p.A112 micro:bit V2 to suit

STEM

	Cat.	Qty 1+	Qty 3+
Suits micro:bit	KR9262	$69.95	$62.95

ROBOT KITS

TRIBO 3-in-1 Coding Kit with 182 Pieces

A great way to learn the fundamentals of coding and robotics. This 182 piece kit can be constructed into three different robots. The Doodler holds a marker pen to draw patterns, the Shooter fires three soft-tipped bullets at targets around your room, and the Sweeper collects anything in its path as it moves. To program, simply enter the desired movements into the integrated keypad and press run. No computer, Smartphone or Tablet needed.

- 3 different models can be built
- Self-coding
- Entry-level
- 4 x AAA batteries requried
- Suitable for ages 8+

STEM

	Cat.	Qty 1+	Qty 3+	Qty 6+
	KR9264	$49.95	$44.95	$39.95

Mazzy Xtreme Bots Kit with Bluetooth® Technology

NEW

Mazzy by Xtrem Bots is a robot designed for young learners to start computer programming in an easy, fun and creative way. With just a screwdriver and a step-by-step assembly guide, kids can enjoy the amazing experience of building a robot. Mazzy will follow orders programmed by the user through the control panel located on the robot or through the app which can easily be downloaded. MAZZY consists of modular parts, which allow's the construction of 2 different robot models: an Android or a Rover off-road vehicle.

- Suitable for ages 8+

STEM

Specifications	KR9240
Batteries	4 x AA required (not included)
Dimensions	180(L) x 160(W) x 80(D)mm

	Cat.	Qty 1+	Qty 3+
	KR9240	$79.95	$71.95

PROGRAMMABLE ROBOTS

Programmable Apitor SuperBot Robot Kit

The SuperBot is a DIY 18-in-1 Programmable STEM Educational Robot Kit that allows children to express their innovative ideas by using the blocks and sensors not only to build and play, but also allows children to do coding with their creations by graphical programming language used by tens of millions. The kit include's 400+ pieces of blocks that kids can build more than 18 cool multi-functional models and explore more with their creativity. Learn to use Graphical Programming to code your robot to play, such as moving, avoiding obstacles, following lines, creating colour effects, and more. Suitable for ages 8+. Requires 3 x AA batteries (not included).

Tablet not included.

STEM

	Cat.	Qty 1+	Qty 3+	Qty 6+
18-in-1	KJ9354	$129.00	$115.95	$102.95

Meet Edison Robot Kit

A compact, sturdy robot that can be programmed in 3 different ways, making it suitable for all ages. Edison is your new robot buddy who will teach you about electronics, programing and robotics in a fun and engaging way. He's equipped with all the sensors, outputs and motors needed to introduce you to the amazing world of robotics. Once you've learned all about Edison's abilities, sensors and controls you can move on to programming him.

FOR BEGINNERS:

Edison has a barcode scanner to activate one of six inbuilt programs, including line following, clap controlled driving and obstacle avoidance.

FOR INTERMEDIATE:

EdBlocks is a drag-and-drop block based programming language and can run in a browser. EdWare is the next level up from EdBlocks, with the simplicity of drag-and-drop & more features.

FOR ADVANCED:

EdPy is the hardcore programming option for those who want to take their Edison to the limit. Requires 4xAAA batteries (not included).

STEM Edison robotics for everyone

	Cat.	Qty 1+	Qty 3+	Qty 6+
MeetEdison Robot Kit	KR9210	$99.95	$89.95	$79.95

Meet Edison Robot Spare Parts Kit

This collection of spare parts for the MeetEdison robot has all the removable parts, so there's no need to panic if you lose a bit! It also includes a sachet of silicon grease to keep your robot rolling smoothly. See website for full parts list.

	Cat.	Qty 1+	Qty 3+	Qty 6+
	KR9211	$29.95	$26.95	$23.95

EdCreate - Edison Robot Creator's Kit

The EdCreate Edison robot creator's kit is a 5-in-1 expansion pack construction system. Designed to work with the Edison robot, EdCreate enriches students' STEM education experience through interactive engineering and programming projects.

The EdCreate system can be used with Edison robots to complete five EdBuild projects:

- EdTank
- EdDigger
- EdRoboClaw
- EdCrane
- EdPrinter

The EdBuild projects require progressive levels of coding capabilities, making them a perfect addition to the Edison programming and robotics curriculum.

	Cat.	Qty 1+
EdCreate - Edison Robot Creator's Kit	KR9212	$49.95

RADIO KITS

Crystal Radio

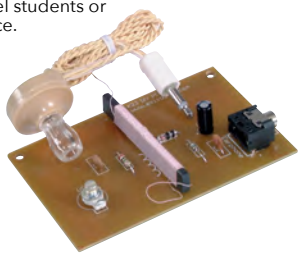
KwiK Kit | 15 MINS | SIMPLE

A radio without batteries!

Enjoy AM broadcasting without using battery or other power sources. Ideal for entry-level students or hobbyist with little electronics experience.

- Includes circuit explanation
- Kit supplied with screen printed PCB (81x53mm), germanium diode, pre-wound coil, earphone and all components
- PCB: 80 x 50mm

Note: Soldering is required.



	Cat.	Qty 1+	Qty 5+
Kit	KV3540	$21.95	$19.45

Cardboard Radio Construction Kit

Build a working cardboard radio with just a screwdriver. Easy to assemble and sounds great, no previous electronics knowledge needed. Included radio board is based around a modern digital tuning IC and is great for building into other projects.

- AM/FM Radio with AUX input
- Volume and tuning controls
- No soldering needed, all fasteners included
- Extendable antenna
- 3 x AA batteries required (not included)
- Suitable for ages 8+

	Cat.	Qty 1+	Qty 3+	Qty 6+
Cardboard Radio Construction Kit	KJ9021	$24.95	$22.45	$19.95

CLOCK MAKING KITS

Make Your Own Clock Kit

This educational clock is designed to stimulate your child's curiosity about the concept of time. The brightly coloured parts are easy to assemble and most children will require little or no parental assistance.

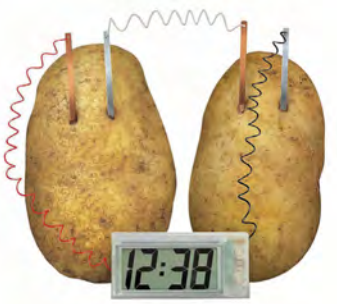
- Includes a wind-up pendulum based mechanism
- No batteries required!
- Suitable for ages 6+
- Dimensions: 195(Dia)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
	KJ8996	$16.95	$14.95	$13.45

Potato Clock

You can generate enough electricity to run a digital clock by plugging electrodes into common potatoes! An amazing chemical experiment which also works with tomatoes, lemons, apples - even soft drink or beer! All parts (except fruit/veg) supplied including:

- Highly accurate digital clock module
- Metal electrodes, wire
- Instructions and fluid beakers
- Perfectly safe for children and highly educational. (Do not eat fruit/veg after using as batteries)
- Clock dimensions: 65(W) x 30(H) x 12(D)mm
- Suitable for ages: 10+



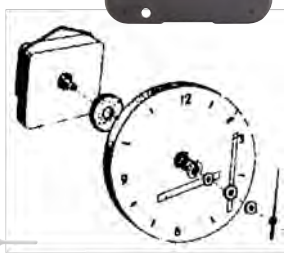
	Cat.	Qty 1+	Qty 3+	Qty 6+
	KJ8937	$12.95	$11.35	$10.35

Quartz Clock Movement

MAKE A CUSTOM CLOCK OR REPAIR AN OLD ONE

This is a standard hour/minute/sweep second movement found in almost all electric clocks worldwide. Very reliable. Standard nut bushing mount. We have sold 10's of thousands of these and, as far as we can tell, not one has come back.

- Very compact 56 x 56 x 15mm
- Self starting one second stepping motor
- Uses 1 x AA battery that lasts 1 year
- ±15 second/month accuracy
- Supplied with three sets of hands
- Shaft length 19mm, dia. 7.5mm
- Includes sweep second hand



	Cat.	Qty 1+	Qty 3+	Qty 6+
	XC0100	$16.95	$14.95	$13.45

Zodiac Wall Clock Kit

NEW

This intricately detailed wooden zodiac clock is a joy to assemble and will make a great art piece in your home. In the centre of the clock is a standard Quartz clock movement with a sweep second hand. Surrounding this is an adjustable dial plate that shows the twelve constellations, and three other dials that let you manually set the date, day of the week, and month. The 168 wooden pieces are dip-dyed in different colours, assemble just like a wooden jigsaw puzzle, and are held in place using the supplied glue, nuts and bolts. 1 x AA battery is required (not included).

- Silent running Quartz clock movement
- 168 wooden pieces
- Adjustable constellation, date, day & month
- 1 x AA battery required (not included)
- Suitable for ages 14+
- Dimensions: 335(L) x 295(H) x 55(W)mm

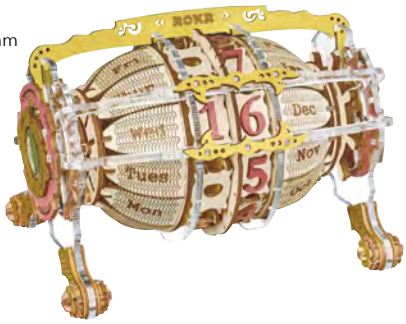
	Cat.	Qty 1+	Qty 5+
168 Piece	KJ9050	$69.95	$62.95

Time Engine Calendar Kit

NEW

This beautifully designed wooden time engine calendar is fun to assemble and will make a magnificent art piece on your desk or table. In the centre of the assembly are two date dials to manually set the date each morning, and a turntable on either side for setting the day of the week and month. A classic metal pocket watch with roman numeral print is also built into one side. The 250 laser cut wooden pieces are dip-dyed in different colours and assemble similar to a wooden jigsaw puzzle. Supplied with sandpaper and a transparent acrylic frame. 1 x AA battery is required (not included). Recommended for ages 14+.

- Classic metal pocket watch
- 250 wooden pieces
- Adjustable date, day and month
- 1 x AA battery required (not included)
- Suitable for ages 14+
- Dimensions: 215(L) x 145(W) x 146(D)mm



	Cat.	Qty 1+	Qty 5+
250 Piece	KJ9051	$59.95	$53.95

TELESCOPE & MICROSCOPES

Junior Telescope Kit

NEW

This astronomical telescope is designed to give children a close-up view of the moon and stars. The angle adjustment levers and focus knob are designed to be easy to operate by small hands, and the finderscope on the side helps find objects in the sky much quicker. The multi-coated lens provides a high refractive index to help make images clearer, brighter and sharper without dark edges, and the interchangeable 20X, 30X and 40X Barlow lenses help get the best view. A universal Smartphone bracket is also supplied so you can take and share photos of what is seen through the telescope. Fold-up tripod included. Suitable for ages 6+.

Specifications	KJ9357
Dimensions	490(H) x 445(L) x 31(W)mm (set up)

	Cat.	Qty 1+	Qty 3+	Qty 6+
Telescope	KJ9357	$29.95	$26.95	$23.95

Junior Microscope Kit

NEW

This biological microscope is designed to enable curious children to explore the micro world around them. The adjustment knobs make it easy for small hands to operate, and a 360° rotating eyepiece holder makes it more convenient for kids to share. The switchable 10X and 20X eyepieces, combined with the 4X, 10X and 40X objective lenses provide an impressive combined magnification up to 1200X, and 5 different apertures and 4 colour filters help improve the optics. Integrated upper and lower white LEDs illuminate 3D objects or specimins for a clearer view (2 x AA batteries required - not included). Supplied with a wide range of child-friendly accessories, including a pre-prepared slide so the microscope can be put to use straight away. Suitable for ages 6+.

Specifications	KJ9358
Batteries	2 x AA (sold separately)
Eyepieces	10X, 20X
Objective Lenses	4X, 10X, 40X
Dimensions	218(H) x 168(D) x 105(W)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Microscope	KJ9358	$29.95	$26.95	$23.95

USB Portable Digital Microscope with 600X Zoom and LED Endoscope

A digital microscope suitable for many applications. Includes 6 adjustable LEDs to give the right level of illumination. USB connector attaches to your computer to give a 640 x 480 resolution.

- Adjustable magnification up to 600X
- Includes tripod

Specifications	QC3191
Magnification	600X
Focus Range	40mm
Camera	3MP
Resolution	640 x 480
Refresh Rate	30FPS
Microscope Dimensions	145(L) x 13mm Dia.
Dimensions	160(H) x 120(L) x 100(W)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
640 x 480 Resolution - USB	QC3191	$59.95	$53.95	$47.95

1080P Digital Microscope with 600X Zoom and 4.3" HD Screen

Digital microscope with built in 4.3" OLED display. Collect items from around the house and take a closer look to satisfy your curiosity! The microscope provides its own illumination via LEDs to see the objects even clearer. Great for hobbyists and curious young minds.

- Adjustable Magnification up to 600X
- Rechargeable Lithium Ion Battery

Specifications	QC3193
Magnification	600X
Focus Range	60mm
Camera	3.6MP CCD
Resolution	1080p
Screen Size	4.3"
Battery	Built-in Li-ion Rechargeable
Microscope Dimensions	120(W) x 150(H) x 65(D)mm
Weight	300g

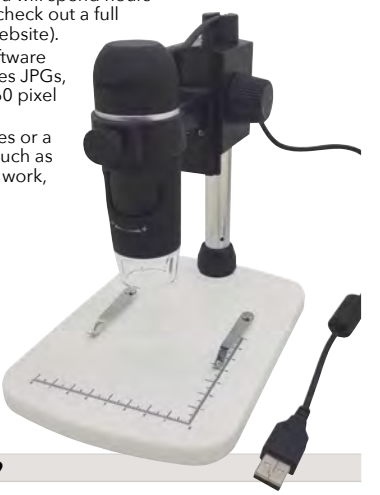
	Cat.	Qty 1+	Qty 3+	Qty 6+
1080p Resolution - Rechargeable	QC3193	$129.00	$115.95	$102.95

5MP USB 2.0 Digital Microscope with Professional Stand

A USB microscope with a simple but incredibly useful stand that allows you to make fine adjustments to the vertical height of the microscope and swivel the scope arm around a 360 degree range. This permits a greater level of viewing accuracy and stability. The sharpness of texture on magnified objects is incredible to look at you will spend hours searching for things to magnify (check out a full resolution 5MP capture on our website).

It comes with a great piece of software for capturing 5MP (2592x1944) res JPGs, BMPs, TIFs or PNGs and 1280x960 pixel AVI files.

Excellent for educational purposes or a myriad of practical applications such as technicians, jewellers, laboratory work, and much more.



Specifications	QC3199
Image Sensor	5MP
Focus Range	Manual focus from 10mm to 150mm
Still Image Resolution	2592x1944, 2048x1536, 1600x1200, 1280x960 pixels
Video Capture Resolution	1280x960
Magnification Ratio	10x, 300x (at 5MP res)
Compatibility	WinXP/Vista/7/8, Mac 10.6-10.8
Bundled Software	Microcapture Pro with measurement function
Dimensions	Microscope: 110(L) x 33(Dia)mm, Stand: 165(H) x 165(L) x118(W)mm

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 4+	Qty 10+
10x, 300x	QC3199	$199.00	$178.95	$158.95

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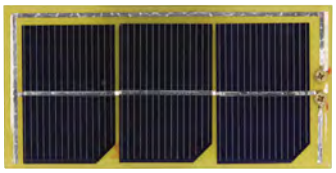


Specifications	ZM9012
Open Circuit Voltage	1.5V
Short Circuit Current	500mA
Dimensions, Weight	148(L) x 74(W)mm, 33g

Cat.	Qty 1+	Qty 2+	Qty 4+
ZM9012	$9.95	$9.45	$8.95

Solar Educational Kit

Experiment with solar energy - the energy source of the future. Our solar educational kit lets you build your own solar models. Suitable for ages 8+.

The kit comes complete with:

- Solar cell module
- Solar energy booklet explaining the why & hows of solar energy
- Small DC motor
- Screws and nuts
- Wire with motor clips
- Colour spinner discs
- Paper aeroplane and bird models
- Plastic turntables with 4 sizes, 5/8", 1", 1.5" and 2"
- Plastic fan spinner

Cat.	Qty 1+	Qty 3+	Qty 6+
KJ6690	$18.95	$16.95	$14.95

Solar Powered Grasshopper Kit

Are your children fascinated with insects? This mini solar powered grasshopper is easy to assemble and will keep them occupied for hours. Runs from sunlight or by a 50W halogen bulb. Small enough to fit in the palm of their hand! Suitable for ages 8+.

- Dimensions: Approx 40mm long

Cat.	Qty 1+	Qty 3+	Qty 6+
GT3751	$12.95	$11.35	$10.35

6-in-1 Solar Educational Robot Kit

A hands on experience in the world of solar power. This kit includes all the parts needed to construct up to six different projects. Choose between a robot, helicopter, plane, windmill, water skies or even a three wheeler! Don't even worry about screws, everything snaps together for easy assembly and its all solar powered so no batteries are required. For the best results, use it in direct sunlight. For cloudy days use a 50W halogen light. Suitable for ages 10+.

Specifications	KJ8936
Dimensions (Approx)	
Windmill	185 x 185 x 190mm
Helicopter	234mm
Water Skier	140 x 75 x 95mm
Three Wheeler	65 x 50 x 60mm
Robot	50 x 85 x 45mm
Plane	185 x 185 x 130mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
6-in-1	KJ8936	$12.95	$11.35	$10.35

Solar Bug Kit

Cute as a button and easy to build, our bug loves to play in the sun. Watch the gears turn to make the legs work. Great for learning about construction, solar, mechanics and electricity.

- Teaches about renewable energy
- Easy to snap together construction
- Sidecutters needed to trim parts
- Play in the sun to learn about solar power

	Cat.	Qty 1+	Qty 3+	Qty 6+
Solar Bug Kit	KJ9027	$19.95	$17.95	$15.95

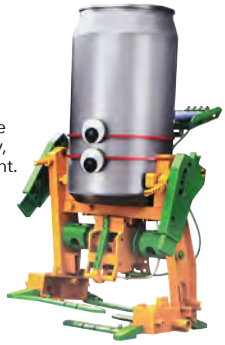
6-in-1 Solar Robot

This fantastic DIY kit for the kids is super fun and captures the imagination of the young ones with everyday household material. Build wacky robots out of a coke can, a water bottle or wasted CDs, and even better, all of them can be powered by the sunlight using mini solar panels. A great toy to play, learn, and encourage awareness of the environment. Suitable for ages 10+. No batteries required.

6 Robots to build:

- Drummer Robot
- Flying Bird
- Walking Robot
- Street Roller
- Bottle Yacht
- CD Racer

Note: Can not included.



	Cat.	Qty 1+	Qty 3+	Qty 6+
6-in-1	KJ8939	$19.95	$17.95	$15.95

6-in-1 Solar Educational Kit

A brilliant kit for any junior eco-scientist. You can build any one of six different projects from the parts in the kit, then make them work by solar power. No tools, soldering or glue required. All the parts snap together with spring terminals for the wiring. The instructions are excellent with extremely clear and concise illustrations detailing every step. The finished projects are solar powered, but can also be powered by the light from a household 50W halogen light. Suitable for ages 10+.

Projects:

- Windmill
- Dog
- Airboat
- Car
- Plane
- Revolving Plane

THOUSANDS SOLD!

	Cat.	Qty 1+	Qty 3+	Qty 6+
6-in-1	KJ8926	$19.95	$17.95	$15.95

8-in-1 Solar Educational Robot Kit

NEW

A fun and inspiring way to teach kids about solar power and robotics. There are eight unique robots to build that drive, walk or roll thanks to the solar-powered motor and gears. No batteries are required, simply operate under direct sunlight. 194 Pieces. Supplied with a detailed instruction manual. Recommended for ages 8+.

8 Designs:

- Somersaulting Armadillo
- 6-legged Crawling Bug
- Vibrating Tank
- Biped Drummer
- Rolling Robot
- Racing Car
- Stomping Dino
- Spinning Wheel-Bot

	Cat.	Qty 1+	Qty 3+	Qty 6+
8-in-1	KJ9356	$24.95	$22.45	$19.95

LEARN ABOUT GREEN POWER CONTINUED

Solar Rover Kit

At night, Solar Rover rests, but during the day, its out exploring, with its radar dish scanning the landscape as it prowls on its six wheels. Learn about construction, solar, gears and be inspired to reach for the stars! More advanced than KJ9027 Solar Bug, great for kids interested in space.

- Easy snap together construction
- Sidecutters needed to trim parts
- Play in the sun to learn about solar power
- Transparent windows to view moving parts

	Cat.	Qty 1+	Qty 3+	Qty 6+
Solar Rover Kit	KJ9026	$24.95	$22.45	$19.95

"T4" Transforming Solar Powered Robot Kit

The basis of this kit is two moulded 'frames' of component parts reminiscent of a plastic model aeroplane kit - about 50 parts! It also has a small (40 x 25mm) solar panel, a tiny electric motor, gears, pinions, etc. It also includes decals. It can 'transform' between a T-Rex or Rhino beetle with moving legs and jaw, Robot with walking legs and moving wheels, and a futuristic miners drilling machine with moving drilling bit and wheels. You will probably need small diagonal pliers to cut out and de-flash all the plastic parts from the frame. Suitable for ages 8+.

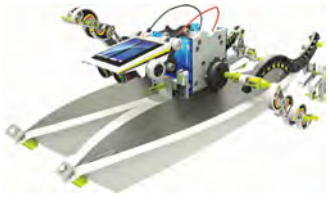
- Robot stands about 100mm tall
- Detailed 34 page assembly manual is also included

	Cat.	Qty 1+	Qty 3+	Qty 6+
4-in-1	KJ8965	$26.95	$23.95	$21.45

Solar Powered 14-in-1 Robot Kit

This kit has so many included parts we don't have the time to count them, certainly at least 100 or more. Notable are a solar panel, solar powered electric motor boat hull components, gears etc. This kit can be transformed into 14 different functional robots, some of which admittedly are whimsical, but the kit itself is a fantastic learning experience: Mechanical, educational, scientific & solar physics skills are exercised. Best of all the kit comes with an assembly manual that is LEGO® like in the clarity of description. The manual itself runs to over 80 pages. This kit represents sensational value and is perfect for bright kids 10+ years. (A side cutter is really required to clip all of the parts out of the moulding frames - try TH1897). Suitable for ages 10+.

- Dimensions (Boat - bot): 245(L) x 170(W) x 100(H)mm



	Cat.	Qty 1+	Qty 3+	Qty 6+
14-in-1	KJ8966	$39.95	$35.95	$31.95

Crooke's Radiometer

A beautiful desk gadget or serious educational toy, the Crooke's Radiometer demonstrates that light has energy, and will turn its vanes even when illuminated by a torch. Despite many people thinking that the motion is caused by the impact of photons on the vanes, the Radiometer in fact operates as a heat engine, driven by the different temperatures of the black and silver vanes.

- One piece glass body with metal vanes
- Use as simple desk ornament
- Great for physics demonstrations

Cat.	Qty 1+	Qty 3+	Qty 6+
GG2108	$39.95	$35.95	$31.95

HYDRAULIC ROBOTIC CONSTRUCTION KITS

12-in-1 Solar Hydraulic Robot Kit

Here's a kit that's easy to build, and a great way to learn about solar power and hydraulics. There's 12 different models to build, including a crocodile, T-Rex, elephant, monkey, ostrich, scorpion, excavator and forklift.

- 12 different projects to build and rebuild
- Solar electric and hydraulic power
- Each model has many different animation features, making for fascinating play time

	Cat.	Qty 1+	Qty 3+	Qty 6+
12-in-1	KJ9030	$39.95	$35.95	$31.95

Hydraulic Cyborg Hand Kit

NEW

A fun to build hydraulic cyborg hand that simulates the movements of your hand and fingers. The three fingers and opposable thumb have adjustable joints, which enables you to pick up large objects like a bottle of water to smaller items like a pen. It can fit left or right hands of different sizes, and uses hydraulic mechanical power so no batteries are needed. This makes a great gift and can teach kids how hydraulic systems work. Step-by-step build instructions included. Suitable for ages 10+.

STEM

	Cat.	Qty 1+	Qty 3+	Qty 6+
229 Pieces	KR9266	$39.95	$35.95	$31.95

Hydraulic Robot Arm Kit

This Robot arm has no motors and does not require any batteries as it relies on hydraulics to do all the work! Use it to command 6 axes of varied movement. Suitable for ages 10+.

- Use either the gripper or the suction cup to lift items up to 50g
- It also incorporates a built in braking system!

STEM

Specifications	KJ8997
Wrist Mobility	98°
Elbow Range	44°
Base Rotation	270°
Shoulder Motion	45°
Base Diameter	100mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
	KJ8997	$59.95	$53.95	$47.95

SHORT CIRCUITS VOLUME 1 - SECOND EDITION:

With Short Circuits Volume 1, we give the option of buying the book on its own, or together with the accompanying kit that contains the components for each of the 20-odd projects described in the book. Some of the exciting projects include a Police Siren, Electronic Organ, Sound Effects Unit, Light Chaser and a Solar Powered Radio (an inexpensive solar panel is optional and available separately). Of course, many more projects are included! Remember, no prior knowledge of electronics is needed and the projects are totally safe. This volume will teach constructors everything they need to get started in electronics and is suitable for ages 8+. Kits contain small parts.

- Circuit diagrams included for each project
- Safe 6 volt system
- Techtalk discusses circuit operation and is written in a clear, easy to understand language
- Component layout on the special breadboard is clearly illustrated for each project
- Fun characters introduce each project, explaining the projects use

Short Circuits - Volume 1

BOOK - SECOND EDITION (BJ8502)

Book only.

- Soft cover - 96 pages
- 205 x 275mm

PROJECT KIT (KJ8504)

The complete kit of parts available separately. This includes plastic baseboard, spring connectors and all components needed to complete every project in the book. No instructions are supplied with this kit as they come in the book which is available separately.

BOOK & PROJECT KIT (KJ8502)

Apart from the book, we supply the baseboard, plenty of spring terminals and ALL the components required to build every project in the book, INCLUDING the bonus projects!

- Additional hookup wire can be purchased (WH3025)
- 6VDC (4 X AA) batteries required

MADE IN

	Cat.	Qty 1+	Qty 3+
Volume 1 Book Only	BJ8502	$10.95	$9.45
Project Kit Only	KJ8504	$39.95	$35.95
Volume 1 Book & Project Kit	KJ8502	$45.95	

GRAB YOUR FREE PDF DOWNLOAD:
www.jaycar.com.au/short-circuits

Some of the exciting projects that you can build from this book include:

- **Short circuit tester**
- **Police siren**
- **Sound effects unit**
- **Solar powered radio**
- **Computer type circuits**
- **Magic Eye light alarm**
- **Electronic organ**
- **Light chaser**
- **3 types of transistor amps**
- **And many many more**

SHORT CIRCUITS VOLUME 2: THIRD EDITION:

Once constructors have mastered the art of assembling a circuit with springs they will want to tackle projects that are more complex. The benefit of spring termination falls away once they get into projects that have over, say, 20 parts. In addition to this, projects that work on radio frequency, or RF for short, don't like springs as they start to act like little antennae all over the place! So it's time to graduate to the heart of modern electronics - the printed circuit board. This simple device fulfils the function of mounting board & circuit wiring in one.
The critical element of success in printed circuit board - or PCB for short - assembly is good soldering. Soldering is not for 8 year olds but its fine if they are older or are under adult supervision. In Short Circuits II we teach the reader how to solder. We teach you a lot more as well:

- How to use a Multimeter
- What tools will be needed.
- What sort of workspace is needed
- How the circuit works (Tech talk)
- What to do next
- Making the circuit work in the real world

p.B82
9V battery to complete these projects. SB2423

Short Circuits - Volume 2 - Third Edition

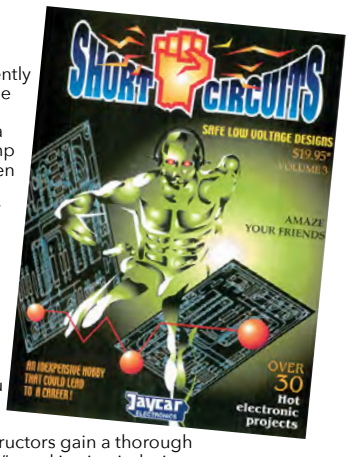
Once constructors have the basic skills and knowledge either from a School Design and Technology course, or tackling Short Circuits Vol 1, you can now have some real fun! With this book (and associated project packs available separately - see following pages) they can make such things as a mini strobe light, police siren, mini organ, a couple of powerful radio transmitters, an FM radio - even a 'Knight Rider' scanner!! All components are fully described and explained, along with tutorials on soldering iron and multimeter use.
All projects are safe and battery powered.

- Soft cover - full colour 148 pages
- 205 x 275mm

MADE IN

	Cat.	Qty 1+
Volume 2	BJ8504	$12.95

SHORT CIRCUITS VOLUME 3 SECOND EDITION:



Like our Volumes 1 & 2 book, Short Circuits Volume 3 is sold independently to each of the 30-odd projects. Some of the projects constructors will build include a Guitar Sustain Unit, a Universal Timer, Car Alarm, Two Lamp Flasher plus many more! There's even a project that demonstrates how constructors can use your computer to interface to the real world via a computer's parallel port. Building the projects described in Volume 3 will provide constructors with the confidence needed to tackle more complex projects, such as those described in the various electronics hobby magazines.

- Step by step instructions show you how to assemble each project
- Techtalk explains the operation of each circuit in detail, to help constructors gain a thorough knowledge of the "Building Blocks" used in circuit design
- "What To Do Next" shows constructors how to modify or further improve your project
- Basic circuit theory is provided to increase constructors level of understanding

Short Circuits - Volume 3 - Second Edition

Each project contains a full technical description, with experimental changes to each circuit also explained. After constructors have built any or all of the described projects, there is no reason why they would not be able to successfully tackle any of the construction projects published in the electronics magazines. This book will end up giving them the knowledge and skill that will elevate them into a fully fledged constructor!

- Soft cover - full colour 128 pages
- 205 x 275mm

MADE IN

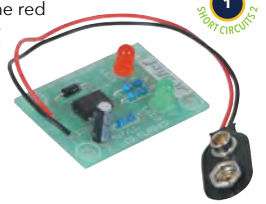
	Cat.	Qty 1+
Volume 3	BJ8505	$14.95

SHORT CIRCUITS 2 PROJECTS

SC2 Project - Red/Green Flasher

PROJECT 1 SHORT CIRCUITS 2

It flashes two LEDs (light emitting diodes) - one red and the other green - alternately, a bit like the light on a police car. A great way to learn how a 555 Timer IC works.



- PCB & all parts supplied
- Requires 9V battery
- Instructions NOT included, See KJ8201 or our full colour project book BJ8504
- Recommended Box - UB5 HB6015 $3.45

	Cat.	Qty 1+	Qty 3+
PCB: 43 x 30mm	KJ8200	$8.95	$8.05
Instructions	KJ8201	$2.50	

SC2 Project - Countdown Timer

PROJECT 2 SHORT CIRCUITS 2

This neat project enables you to dial a time you want to elapse before you want something to happen, say the exposure of a camera shutter or an electrically operated door to stay open. At the end of the timed period (seconds to many minutes) a relay is energized which can switch something on or off. PCB and all parts supplied, including relay.

- Requires 9V battery
- Instructions NOT included. See KJ8203 or our full colour project book BJ8504
- Recommended Box - UB5 HB6015 $3.45

	Cat.	Qty 1+	Qty 3+
PCB: 61 x 47mm	KJ8202	$14.95	$13.35
Instructions	KJ8203	$2.50	

SC2 Project - Hee-Haw Siren With Flashing Light

PROJECT 3 SHORT CIRCUITS 2

This project will make the noise made by emergency vehicles when they are trying to get through traffic. PCB and all parts supplied including flashing LED.

- Requires 9V battery
- Instructions NOT included. See KJ8205 or our full colour project book BJ8504
- Recommended Box - UB5 HB6015 $3.45

	Cat.	Qty 1+	Qty 3+
PCB: 57 x 51mm	KJ8204	$11.95	$10.45
Instructions	KJ8205	$2.50	

SC2 Project - Mini Strobe Light

PROJECT 4 SHORT CIRCUITS 2

No, this unit won't fill a disco with blinding white light. Those things are dangerous and run straight off 240V. This one runs off a 9V battery and gives a surprisingly intense white light especially in darkness. Uses state-of-the-art LED. PCB and parts including LED supplied.

- Requires 9V battery
- Instructions NOT included. See KJ8207 or our full colour project book BJ8504
- Recommended Box - UB5 HB6015 $3.45

	Cat.	Qty 1+	Qty 3+
PCB: 61 x 45mm	KJ8206	$19.95	$17.95
Instructions	KJ8207	$2.50	

SC2 Project - Touch Switch

PROJECT 5 SHORT CIRCUITS 2

This project allows you to turn things on or off simply by touching a small sensor pad with your finger. This could include operating an alarm, water pump, hi-fi speakers, or any other low voltage gadget.

- PCBs & all parts including the relay supplied
- Requires 9V battery
- Instructions NOT included. See KJ8209 or our full colour project book BJ8504
- Recommended Box - UB5 HB6015 $3.45

	Cat.	Qty 1+	Qty 3+
PCB: 75 x 26mm	KJ8208	$15.95	$13.95
Instructions	KJ8209	$2.50	

SC2 Project - Drought Alarm

PROJECT 6 SHORT CIRCUITS 2

Well, not really a big drought. This will test the soil moisture of a favourite pot plant and an alarm will sound if the soil gets too dry.

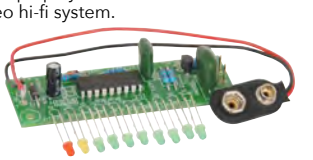
- Instructions NOT included. See KJ8211 or our full colour project book BJ8504
- PCB, speaker & components
- Requires 9V battery
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+	Qty 3+
PCB: 63 x 57mm	KJ8210	$15.95	$13.95
Instructions	KJ8211	$2.50	

SC2 Project - Audio Level Display

PROJECT 7 SHORT CIRCUITS 2

Make your own fancy volume level display you see on DJ mixing desks where the columns of light dance up and down with the music. Connect it to the output of your CD, tape player or radio. Build two of them for displays on your stereo hi-fi system.



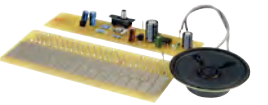
- PCB and all parts supplied
- Requires 9V battery (not included)
- Instructions NOT included. See KJ8213 or our full colour project book BJ8504
- Recommended Box - UB5 HB6015 $3.45

	Cat.	Qty 1+	Qty 3+
PCB: 75 x 26mm	KJ8212	$15.95	$13.95
Instructions	KJ8213	$2.50	

SC2 Project - Electronic Organ

PROJECT 8 SHORT CIRCUITS 2

You can play simple tunes easily once you have built this project! The organ keyboard is actually part of the printed circuit board. It even has vibrato for extra realism. Includes PCB and all board components.



- Requires 9V battery
- Instructions NOT included. See KJ8215 or our full colour project book BJ8504
- Recommended Box - UB1 HB6011 $5.25

	Cat.	Qty 1+	Qty 3+
PCB: 133 x 31mm, 133 x 51mm	KJ8214	$24.95	$22.45
Instructions	KJ8215	$2.50	

SC2 Project - No Brainer Amplifier

This amp is so easy to build, it's a no brainer! It will, however, give a powerful output to bring your MP3 player or sound card alive! Speaker supplied. Two required for stereo. PCB and all relevant parts included.

PROJECT 9 SHORT CIRCUITS 2

- Requires 9V battery
- Instructions NOT included. See KJ8217 or our full colour project book BJ8504
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+	Qty 3+
PCB: 64 x 57mm	KJ8216	$15.95	$13.95
Instructions	KJ8217	$2.50	

SC2 Project - Beam Me Up Scotty Simple Intercom

Enables you to talk (i.e. not shout) between parts of a house, or a house and a garage. You can even leave it on to monitor a baby's room. All parts supplied including PCB and 6-metres of connecting wire. Requires 9V battery.

PROJECT 10 SHORT CIRCUITS 2

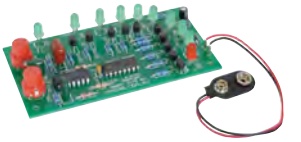
- Instructions NOT included. See KJ8219 or our full colour project book BJ8504
- Recommended Box - UB3 x3 HB6013 $4.50

	Cat.	Qty 1+
PCB: 63 x 57mm	KJ8218	$30.95
Instructions	KJ8219	$2.50

SC2 Project - Skeet Shoot Game

PROJECT 11 SHORT CIRCUITS 2

Here's a fun way to test your hand-eye coordination. The game sends a burst-of-light 'skeet' up along a string of ten LEDs, try to 'hit' it by pressing the FIRE button at the same time as it reaches the red LED.



- Instructions NOT included. See KJ8221 or our full colour project book BJ8504
- PCB, LEDs and components
- Requires 9V battery*
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+	Qty 3+
PCB: 107 x 57mm	KJ8220	$18.95	$16.95
Instructions	KJ8221	$2.50	

SHORT CIRCUITS 2 PROJECTS CONTINUED

SC2 Project - Simple FM Bug

PROJECT 12 SHORT CIRCUITS 2

Small portable FM microphone. Works surprisingly well. Use it as a baby minder/ monitor as well. PCB and all parts supplied.

- Requires 9V battery
- Instructions NOT included
- See KJ8231 for individual instructions or full colour project book BJ8504
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+	Qty 3+
PCB: 59 x 41mm	KJ8230	$14.95	$13.35
Instructions	KJ8231	$2.50	

SC2 Project - Metronome

PROJECT 13 SHORT CIRCUITS 2

This neat little metronome does everything that a traditional metronome does. It produces an adjustable 'tick' sound to help you play your music at just the right tempo. It also flashes a LED once per bar, to help you get the music's rhythm right as well.

- PCB, speaker and all parts supplied including knobs
- Requires 9V battery
- Instructions NOT included
- See KJ8233 for individual instructions or full colour project book BJ8504
- Recommended Box - UB1 HB6011 $5.25

	Cat.	Qty 1+	Qty 3+
PCB: 82 x 82mm	KJ8232	$19.95	$17.95
Instructions	KJ8233	$2.50	

SC2 Project - Jiminy! What's That Cricket Noise?

PROJECT 14 SHORT CIRCUITS 2

This fun project makes the distinct sound of a cricket when triggered by a hidden microphone. Someone walks into a room, says something and the next thing this loud cricket starts to chirp! Hours of fun. PCB and all other parts including microphone supplied.

- Requires 9V battery
- Instructions NOT included
- See KJ8225 for individual instructions or full colour project book BJ8504
- Recommended Box - UB3 HB6013 $4.50

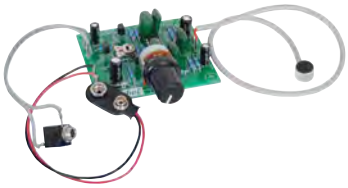
	Cat.	Qty 1+
PCB: 61 x 45mm	KJ8224	$16.95
Instructions	KJ8225	$2.50

SC2 Project - Bionic Ear

PROJECT 15 SHORT CIRCUITS 2

This project enables you to listen to a conversation (or a bird in a tree, etc) beyond what you would normally hear. It uses the principle of a directional microphone. PCB and parts supplied. A plastic bowl or similar is required for the reflector.

- Requires 9V battery
- Instructions NOT included
- See KJ8227 for individual instructions or full colour project book BJ8504
- Recommended Box - UB3 HB6013 $4.50



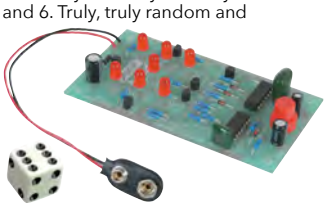
	Cat.	Qty 1+	Qty 3+
PCB: 63 x 57mm	KJ8226	$17.95	$15.95
Instructions	KJ8227	$2.50	

SC2 Project - Casino! Electronic Dice

PROJECT 16 SHORT CIRCUITS 2

Well dice is really plural and this is just one dice a die. At the press of a button roll 6 light emitting diodes flash briefly and only one stays lit, representing a number between 1 and 6. Truly, truly random and never rolls off the table! PCB and all parts supplied.

- Requires 9V battery
- Instructions NOT included
- See KJ8223 for individual instructions or full colour project book BJ8504
- Recommended Box - UB3 HB6013 $4.50



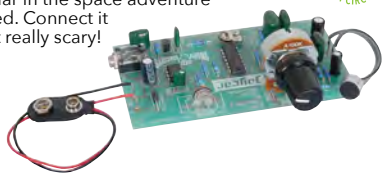
	Cat.	Qty 1+
PCB: 108 x 51mm	KJ8222	$16.95
Instructions	KJ8223	$2.50

SC2 Project - Sound Like a Dalek

PROJECT 17 SHORT CIRCUITS 2

This project will change your voice into that metallic sounding robot voice so familiar in the space adventure movies. PCB and parts supplied. Connect it to the no brainer amp and get really scary!

- Requires 9V battery
- Instructions NOT included
- See KJ8229 for individual instructions or full colour project book BJ8504
- Recommended Box - UB3 HB6013 $4.50



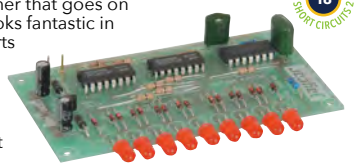
	Cat.	Qty 1+	Qty 3+
PCB: 102 x 57mm	KJ8228	$23.95	$21.35
Instructions	KJ8229	$2.50	

SC2 Project - Knight Rider Light Scanner

PROJECT 18 SHORT CIRCUITS 2

Now you can make the light scanner that goes on the bonnet of that famous car. Looks fantastic in all sorts of places! PCB and all parts supplied.

- Require 9V battery
- Instructions NOT included
- See KJ8237 for individual instructions or full colour project book BJ8504
- Recommended Box - UB3 HB6013 $4.50



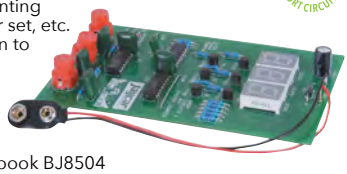
	Cat.	Qty 1+	Qty 3+	Qty 6+
PCB: 102 x 55mm	KJ8236	$19.95	$17.95	$15.95
Instructions	KJ8237	$2.50		

SC2 Project - Event Counter - 0 to 999

PROJECT 19 SHORT CIRCUITS 2

This project demonstrates how 3-digit counters work and can be used for real-world counting jobs, like counting laps on a slot car set, etc. An excellent 'hands on' introduction to electronics.

- PCB and all parts supplied
- Require 9V battery
- Instructions NOT included
- See KJ8235 for individual instructions or full colour project book BJ8504
- Recommended Box - UB1 HB6011 $5.25



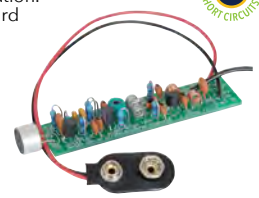
	Cat.	Qty 1+	Qty 3+
PCB: 127 x 76mm	KJ8234	$27.95	$24.95
Instructions	KJ8235	$2.50	

SC2 Project - Three Stage FM Transmitter

PROJECT 21 SHORT CIRCUITS 2

So stable it could be used as a small radio station. The audience would be limited to the backyard as there are rules about such things.

- A microphone is included
- Recommended Box - UB5 HB6015 $3.45
- Instructions included in kit



	Cat.	Qty 1+	Qty 3+	Qty 6+
PCB: 70 x 10mm	KJ8750	$19.95	$17.95	
Recommended Box - UB5	HB6015	$3.45	$3.10	$2.75

Note: Project packs do not include instructions. Constructors can purchase the book, buy a set of instructions for each project separately or download the book as a PDF for free from our website www.jaycar.com.au/short-circuits.

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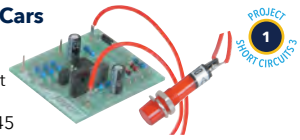
Available for in-store and online purchases, check out www.jaycar.com.au/humm for more information.

SHORT CIRCUITS 3 PROJECTS

SC3 Project - Dasher Flasher For Cars



This lamp flasher mounts on your car dashboard and starts flashing when the ignition is off. Looks like the real thing. Kit includes PCB, lamp and all components.

- Recommended Box - UB5 HB6015 $3.45

	Cat.	Qty 1+	Qty 3+
PCB: 47 x 41mm	KJ8050	$11.95	$10.45
Instructions	KJ8051	$2.50	

SC3 Project - Ding Dong Door Bell

Another useful little kit that generates the sound of a classic Ding Dong door bell. Just the thing for your front door. Kit includes PCB, speaker and all components. 12VDC power required.

- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+
PCB: 105 x 60mm	KJ8052	$15.95
Instructions	KJ8053	$2.50

SC3 Project - Electronic Eye

Install this kit to monitor traffic on a path or through a doorway. When a person or object breaks the beam the loudspeaker will sound.

- Kit includes PCV, LDR, speaker and all components
- 12VDC power required
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+	Qty 3+
PCB: 105 x 61mm	KJ8054	$14.95	$13.35
Instructions	KJ8055	$2.50	

SC3 Project - Simple FM Alarm

Track moving objects, find the dog when it runs away or even recover your stolen food using an FM radio. This kit transmits a tone over the FM band so that you can track it down using an FM radio. Kit includes PCB, 9V battery and all electronic components. A fun and useful project.

- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+	Qty 3+
PCB: 105 x 60mm	KJ8056	$14.95	$13.35
Instructions	KJ8057	$2.50	

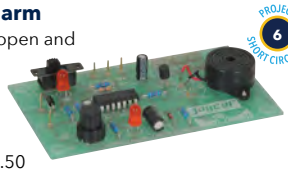
SC3 Project - Infared Remote Link

This can be used as a remote on/off or momentary switch.

- Kit includes PCBs, 9V battery and all electronic components
- Receiver requires 12VDC power
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+
PCB: 105 x 60mm	KJ8058	$30.95
Instructions	KJ8059	$2.50

SC3 Project - Simple Intruder Alarm

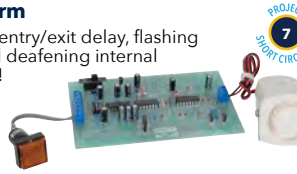


This simple design features a normally open and normally closed input, 40 second siren duration and triggered LED indication.

- Kit includes PCB, buzzer and electronic components
- 12VDC power required
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+	Qty 3+
PCB: 105 x 60mm	KJ8060	$15.95	$13.95
Instructions	KJ8061	$2.50	

SC3 Project - Screamer Car Alarm

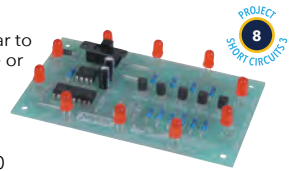


A more sophisticated alarm including entry/exit delay, flashing deterrent light, soft warning alarm and deafening internal siren. Thieves will make a hasty retreat!

- Kit includes PCB, siren and electronic components
- Recommended Box - UB2 HB6012 $7.95

	Cat.	Qty 1+	Qty 3+
PCB: 132 x 88mm	KJ8062	$34.95	$30.95
Instructions	KJ8063	$2.50	

SC3 Project - Light Chase

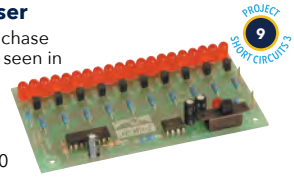


Dazzling display using 10 LEDs that appear to chase each other. Build for a shop, theatre or advertising display.

- Kit includes PCB, LEDs and electronic components
- 12VDC power required
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+	Qty 3+
PCB: 105 x 60mm	KJ8064	$13.95	$12.45
Instructions	KJ8065	$2.50	

SC3 Project - Light Scanner / Chaser



An impressive display using 20 LEDs that chase forward and backward - just like scanners seen in space movies.

- Kit includes PCB, LEDs & all electronic components
- 12VDC power required
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+	Qty 3+
PCB: 105 x 60mm	KJ8066	$16.95	$14.95
Instructions	KJ8067	$2.50	

SC3 Project - Really Bright Flasher

Attract attention with this bright halogen light flasher. The flash rate can be adjusted between 0.5 to 3.5 seconds.

- Kit includes PCB, 12V halogen lamp with base and all electronic components
- 12VAC power required - use MP3044
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+	Qty 3+
PCB: 105 x 60mm	KJ8068	$26.95	$23.95
Instructions	KJ8069	$2.50	

SC3 Project - Two Lamp Flasher

Alternate flashing halogen lamps with an adjustable flash rate between 1 to 4 seconds.

- Kit includes PCB, two halogen lamps with bases and all electronic components
- 12VAC required - use MP3044
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+	Qty 3+
PCB: 105 x 60mm	KJ8070	$34.95	$30.95
Instructions	KJ8071	$2.50	

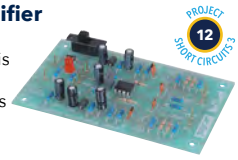
SC3 Project - The Champ Amplifier

A cheap and handy amplifier that can improve low-level signal sources so they can be heard on headphones or a speaker.

- Kit includes PCB, volume potentiometer and all electronic components
- 12VDC power required
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+
PCB: 105 x 60mm	KJ8072	$19.95
Instructions	KJ8073	$2.50

SC3 Project - Universal Stereo Preamplifier

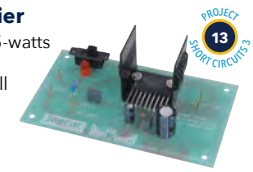


If the input signal to your amplifier is not sufficient you will need a preamplifier such as this one to boost the signal.

- Kit includes PCB and all electronic components
- 12VDC power required
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+	Qty 3+
PCB: 105 x 60mm	KJ8074	$14.95	$13.35
Instructions	KJ8075	$2.50	

SC3 Project - High Power 12V Amplifier



This amplifier-on-a-chip can deliver about 13.5-watts into a 4-ohm speaker. That's quite loud!

- Kit includes PCB, amplifier IC, heatsink and all electronic components
- Speaker and 12VDC power required
- Recommended Box - UB3 HB6013 $4.50

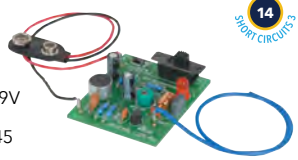
	Cat.	Qty 1+	Qty 3+
PCB: 105 x 60mm	KJ8076	$26.95	$23.95
Instructions	KJ8077	$2.50	

SHORT CIRCUITS 3 PROJECTS CONTINUED

SC3 Project - Simple FM Microphone

PROJECT 14 SHORT CIRCUITS 3

This FM transmitter has many possible uses including baby room monitor, wireless microphone or spy bug. It can be picked up on any FM radio.



- Kit includes PCB, electret microphone, 9V battery and electronic components
- Recommended Box - UB5 HB6015 $3.45

	Cat.	Qty 1+	Qty 3+
PCB: 48 x 42mm	KJ8078	$12.95	$11.35
Instructions	KJ8079	$2.50	

SC3 Project - Mini-Mitter FM Transmitter

PROJECT 15 SHORT CIRCUITS 3

Transmit stereo audio from your tap deck or CD player to any FM radio elsewhere in your house. You could even tune in on a portable walkabout radio.

- Kit supplied with PCB, 1 x AA battery and electronic components
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+	Qty 3+
PCB: 105 x 60mm	KJ8114	$34.95	$31.45
Instructions	KJ8115	$2.50	

SC3 Project - Low-Cost Intercom System

PROJECT 16 SHORT CIRCUITS 3

A low-cost method of communicating between two rooms. The remote unit is hands free so it's also great as a baby monitor.

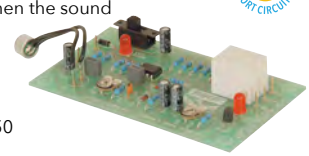
- Kit includes PCB, speakers and electronic components
- 12VDC required
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+
PCB: 105 x 60mm	KJ8080	$19.95
Instructions	KJ8081	$2.50

SC3 Project - Vox - Sound Switch

PROJECT 18 SHORT CIRCUITS 3

This sound-activated switch closes a relay when a loud-enough sound is heard. It switches off when the sound stops. Ideal for radio transmitters or surveillance applications.



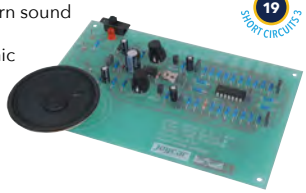
- Kit includes PCB, relay, electret mic & electronic components
- 12VDC required
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+	Qty 3+
PCB: 105 x 60mm	KJ8084	$15.95	$13.95
Instructions	KJ8085	$2.50	

SC3 Project - Train Sound FX

PROJECT 19 SHORT CIRCUITS 3

Authentic sounding train whistle and horn sound effects for your model railway.



- Kit includes PCB, speaker and electronic components
- 12VDC power required
- Recommended Box - UB2 HB6012 $7.95

	Cat.	Qty 1+	Qty 3+
PCB: 160 x 103mm	KJ8086	$28.95	$25.95
Instructions	KJ8087	$2.50	

SC3 Project - Guitar Practice Amplifier

PROJECT 22 SHORT CIRCUITS 3

This low cost amplifier allows you to practice your guitar without annoying the neighbours. It has a guitar type input socket, small speaker and volume.

- Kit includes PCB, speaker socket and electronic components
- 12VDC power required
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+
PCB: 105 x 60mm	KJ8092	$18.95
Instructions	KJ8093	$2.50

SC3 Project - Guitar Sustain Unit

PROJECT 26 SHORT CIRCUITS 3

Add this sustain unit to your guitar to make it sound more fulfilling. Features adjustable Decay and Attack.

- Kit includes PCB, 6.5mm sockets and electronic components.
- 12VDC power required
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+	Qty 3+
PCB: 105 x 60mm	KJ8100	$26.95	$23.95
Instructions	KJ8101	$2.50	

SC3 Project - Guitar Distortion Unit

PROJECT 27 SHORT CIRCUITS 3

Distortion is popular to many guitarists. It can make the music sound quite different. Project includes PCB, 6.5mm sockets and electrical components.

- 12VDC power required
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+	Qty 3+
PCB: 105 x 60mm	KJ8102	$17.95	$15.95
Instructions	KJ8103	$2.50	

SC3 Project - Regulated +12V Power Supply

PROJECT 28A SHORT CIRCUITS 3

Many of the Short Circuits 3 projects require 12VDC power. Using our plugpack (MP3055), this low cost power supply is ideal to power these projects.

- Kit supplied with PCB, 12V regulator and electronic components
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+	Qty 3+
PCB: 105 x 60mm	KJ8104	$13.95	$12.45
Instructions	KJ8105	$2.50	

SC3 Project - Regulated +/- 12V Power Supply

PROJECT 28B SHORT CIRCUITS 3

Some applications need a positive and negative supply. This circuit will supply a +12V and -12V rail.

- Kit supplied with PCB, 12V regulators and electronic components
- Requires plugpack MP3055
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+	Qty 3+
PCB: 105 x 60mm	KJ8106	$16.95	$14.95
Instructions	KJ8107	$2.50	

SC3 Project - Universal Timer

PROJECT 29 SHORT CIRCUITS 3

This timer is adjustable between 1-second to 3.5 minutes. An LED illuminates during the timing period and a buzzer sounds at the end.

- Kit supplied with PCB, buzzer & electronic components
- 12VDC power required
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+	Qty 3+
PCB: 105 x 60mm	KJ8108	$17.95	$15.95
Instructions	KJ8109	$2.50	

SC3 Project - Waveform Generator

PROJECT 30 SHORT CIRCUITS 3

This low-cost signal generator produces adjustable square and triangular waves between 100Hz-20kHz. Ideal for testing, troubleshooting and developing circuits.

- Kit supplied with PCB and electronic components
- 12VDC power required
- Recommended Box - UB3 HB6013 $4.50

	Cat.	Qty 1+	Qty 3+
PCB: 105 x 60mm	KJ8110	$19.95	$17.95
Instructions	KJ8111	$2.50	

KM1090

LEARN TO SOLDER KITS

Amazing Wearable Badges & Electronic Dice Solder Training Kits

Now here's a great way to get started with soldering, learn a little about electronics, and end up with a really fun wearable badge or electronic LED dice at the end! This range of projects are brand new and designed exclusively by Jaycar. Each project is powered by a small CR2032 Lithium coin battery, and the badges include a lapel pin so you can wear it too.

Each of the designs has a different look and feel, while the electronics involved is slightly different in each one, so you'll learn more about electronics and how it works even if you build them all!

KM1092

SKULL BADGE WITH ALTERNATING FLASHING LEDS
This decorative skull design uses a simple transistor circuit to make the LED eyes flash in an alternating pattern. You'll also learn to solder and have a great badge to show for it!
KM1090

OWL BADGE WITH TOUCH-SENSITIVE LED EYES
You'll have a hoot with this fun kit. It shows you how transistors can be used to have a light finger touch light up LEDs! It's also a great soldering training tool.
KM1092

ROCKET BADGE WITH FLASHING LEDS
Blast off with this great project using the robust 7555 timer chip. You'll make the LEDs flash and have a blast soldering it together, while learning how timer chip can create alternating outputs.
KM1094

KM1094

PIRATE BADGE WITH FLASHING EYES *Not illustrated.*
Solder me hearties! Bring Captain Jaycar to life and learn how the 7555 timer chip can create alternate flashing LEDs! You'll learn to solder it all together too.
KM1096

ROBOT BADGE WITH TOUCH-SENSITIVE LEDS AND BUZZER
This great robot has a touch-sensitive pad which makes the buzzer and LEDs light up when you touch it. It'll demonstrate touch-pads and the powerful 7555 timer, as well as soldering techniques.
KM1098

ELECTRONIC DICE *Not illustrated.*
Tap the module on the table to generate a random number between one a six, indicated by the LEDs on the top! It's great to build and highly functional.
KM1099

KM1098

	Cat.	Qty 1+	Qty 3+	Qty 6+
Decorative Skull Badge	KM1090	$19.95	$17.95	$15.95
Owl Badge	KM1092	$19.95	$17.95	$15.95
Rocket Badge	KM1094	$19.95	$17.95	$15.95
Pirate Badge	KM1096	$19.95	$17.95	$15.95
Robot Badge	KM1098	$19.95	$17.95	$15.95
Electronic Dice	KM1099	$19.95	$17.95	$15.95

MAKER KITS

Build-A-Game Learning Kit

An Arduino®-based 8-bit handheld game console that you can code or upload your favourite Arduboy games. It is based on the ATMEGA32U4 chip, driven by an Arduino® Leonardo, and features a 1.3" OLED screen. It can be powered by connecting a USB cable or from 2 x AA batteries (not included).

Dimensions:
100(L) x 65(W) x 28(D)mm

maycar

Cat.	Qty 1+	Qty 3+	Qty 6+
XC3752	$49.95	$44.95	$39.95

maycar

Look out for our new Maycar kits in the catalogue and on our website.
Maycar kits are projects designed to give you or your kids a springboard into the world of making with Electronics.
We'll be adding lot's of new kits so stay tuned…

3D Traffic Lights Learn to Solder Kit

Kids can take their soldering skill to the next level with this 3D traffic lights kit, then put it to good use on their toy car or train set. Thanks to the included 4017 integrated circuit (IC), the traffic lights will flash just like real traffic lights. You can also adjust the delay between lights. Kit includes circuit board, 9 x LEDs, resistors, trimpot, transistors, capacitors, diodes, 4017 IC with IC socket, on/off switch, and a 9V battery holder with mounting hardware (9V battery not included). Soldering iron, solder and cutters required.

- Medium difficulty
- Soldering required

9V battery required

duinotech

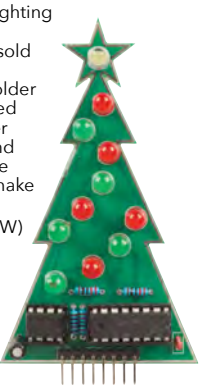
Cat.	Qty 1+	Qty 3+	Qty 6+
XC3758	$19.95	$17.95	$15.95

Christmas Tree Learn to Solder Kit

A great way to get into the Christmas spirit and learn about electronics, soldering, and Arduino® all at the same time. This kit includes a tree shaped circuit board, coloured LEDs, and electronic components to make the tree produce amazing lighting effects when combined with an Arduino® UNO (sold separately). A soldering iron (eg. TS1465) and solder (eg. NS3013) are required as well, and a multimeter (QM1500) and third-hand PCB holder (TH1982) are also recommended to make construction easier.

Dimensions: 90(H) x 50(W) mm (excluding pins)

Arduino® UNO required



duinotech

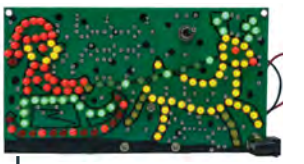
Cat.	Qty 1+	Qty 3+	Qty 6+
XC3754	$9.95	$8.95	$7.95

Santa Sleigh Learn to Solder Kit

Take your soldering skills to the next level with this Riding Santa Kit. The kit includes 126 multicoloured LEDs that animate the stars, sleigh, reindeer legs, and Christmas trees. Power from a 9V battery (not included) to keep it portable, or connect a 9-12VDC power supply (sold separately) for a permanent decoration in your room. An on/off switch is included. Kit includes circuit board, 126 x LEDs, resistors, transistors, capacitors, on/off switch, DC socket, and a 9V battery holder with mounting hardware. Soldering iron, solder and cutters required.

- Medium difficulty
- Soldering required

9V battery required



duinotech

Cat.	Qty 1+	Qty 3+	Qty 6+
XC3756	$29.95	$26.95	$23.95

ELECTRONICS KITS & PROJECTS:

We are still making a surprising number of kits for printed magazine articles. This is especially so for past projects described in the venerable "Silicon Chip" magazine. You can identify these projects as the Silicon Chip logo will appear alongside the kit in question. Indeed, all kits shown have an icon revealing the original source magazine article, including recent kits from DIYODE magazine.

KIT BACK CATALOGUE:

We have also continued to expand our back catalogue of kits that we still have stock of at the Head Office but do not carry in stores. If you are looking for a kit of an old project, check out our website at **jaycar.com.au/kitbackcatalogue** for a full list of these great kits.

A GUIDE TO KIT ICONS:

SIMPLE
These kits are straightforward to assemble, generally built in one session and will require some basic electronics knowledge and soldering skills. Most are battery or AC adaptor powered. They may not have enclosures (i.e."boxes") or front panels.

DETAILED
Similar to the above but basically bigger. They are either "short forms" of larger projects or are fully operational projects with enclosures, front panels, etc. A greater knowledge of electronics is required to understand their operation and "troubleshoot" if necessary.

COMPLEX
All big projects which by their nature are complex, require several sittings to complete and may require some mechanical assembly. A good knowledge of electronics and manual dexterity is necessary to ensure success.

240V POWERED
All mains kits have this logo. We do this because we feel it is necessary that only experienced kit constructors should attempt mains powered projects. It is generally a good idea to have a competent colleague check your work before applying power.

BATTERY INCLUDED
Batteries are included with the kit.

AUTOMOTIVE KIT
Kit is specifically designed for automotive (which could mean motorcycle, caravan or boat as well).

BUILD TIME
We understand that your time is valuable. We have therefore decided to provide you with an estimated build time for all our kits. Each kit includes a stopwatch logo that indicates construction time. We know that you will find this useful.

SMD COMPONENT
Kit involves soldering a SMD (Surface Mount Device). Suitable soldering iron for SMD soldering and proper handling techniques are required.

SMD COMPONENT PRE SOLDERED
Kit supplied with surface mount component already soldered onto the PCB

KWIK KIT
A low cost fast assembly range of kits. Kwik kits are a fully imported range that can be assembled in just one sitting, sometimes only minutes! All printed circuit boards are screened with a component overlay. The instructions assume component knowledge & the ability to follow simple schematic diagrams

GUARANTEE ON KITS

Most kits are successfully constructed with few problems. However, we recommend that if a kit builder does not have enough knowledge to diagnose faults, that the project should not be started unless assistance can be obtained. Unfortunately, one small faulty solder joint or wiring mistake can prevent a project from operating, which would take hours to locate and at normal service rates the service charge could well be more than the total cost of the kit.

If you believe that you may have difficulty in building a kit (which is simply a complete set of separate parts made up to a list provided by the major electronics magazines) and you cannot get assistance from a friend, we suggest you return the kit to us in its original condition for a refund under our satisfaction guarantee. Unfortunately, kits cannot be replaced under our satisfaction guarantee once construction has been commenced. However, should you find any faulty parts (only), we will gladly replace them under warranty.

KIT CONSTRUCTOR'S MANUAL

Kit Constructor's Manual

A must for amateur constructors. Contains much useful information for the more experienced. Huge amounts of information on construction and identification of parts.

• 8 pages

MADE IN

Cat.	Qty 1+
BI8200	$2.00

ELECTRONICS MAGAZINES

Get your DIYODE Magazine at Jaycar!

DIYODE Magazine is a 100% Australian-made, independent publication produced monthly. The magazine's fundamental focus is to provide a valid platform to showcase the amazing creations and the hard work undertaken by the electronics and maker communities, to solve problems or to just make really awesome things! Jaycar gets its stock of DIYODE magazine straight off the printing press, so we usually have it a couple of days earlier than the newsagents. Don't forget to call into a Jaycar store for the latest issue hot off the press. For more information about the magazine visit: www.diyodemag.com

But wait, there's more! Every print magazine purchase includes access to a FREE digital edition on the diyodemag.com website.

Note: Not available in New Zealand.

MADE IN DIYODE

	Cat.	Qty 1+
DIYODE Magazine	BE5030	$9.95

Get your SILICON CHIP at Jaycar

Silicon Chip is Australia's leading magazine for the electronics enthusiast. As well as a great range of fun DIY kits, SILICON CHIP has interesting features articles and popular columns such as "Serviceman's Log" and "Circuit Notebook" etc. Jaycar gets its stock of SILICON CHIP straight off the printing press, so we usually have it a couple of days earlier than the newsagents. Don't forget to call in to a Jaycar store for the latest issue hot off the press.

MADE IN SILICON CHIP

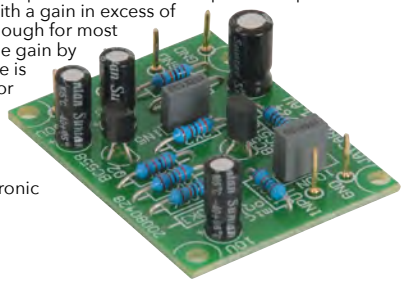
	Cat.	Qty 1+
Silicon Chip Magazine	BE5025	$9.95

AMPLIFIER & PREAMPLIFIER KITS

"Pre-Champ" Versatile Preamplifier

Refer: Silicon Chip Magazine July 1994

This tiny preamp was specifically designed to be used with the 'Champ' amplifier KC5152. Unless you have a signal of sufficient amplitude the 'Champ' will not produce its maximum power output. The 'Pre-Champ' is the answer with a gain in excess of 40dB, which is more than enough for most applications. You can vary the gain by changing a resistor and there is even provision on the PCB for an electret microphone. Use AM4010.



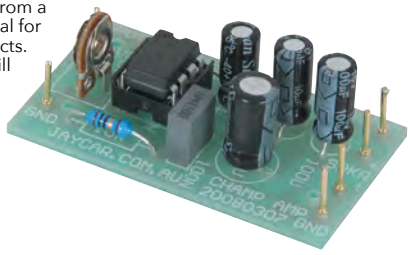
- Power requirement 6-12VDC
- Kit includes PCB and electronic components
- Can be battery powered

	Cat.	Qty 1+	Qty 5+
Kit	KC5166	$10.95	$9.45
Microphone To Suit	AM4010	$2.95	$2.65
Recommended Box - UB5	HB6015	$3.45	$3.10

"The Champ" Audio Amplifier

Refer: Silicon Chip Magazine February 1994

This tiny module uses the LM386 audio IC, and will deliver 0.5W into 8 ohms from a 9 volt supply making it ideal for all those basic audio projects. It features variable gain, will happily run from 4-12VDC and is smaller than a 9 volt battery, allowing it to fit into the tightest of spaces.



- PCB and all electronic components included
- PCB: 46 x 26mm

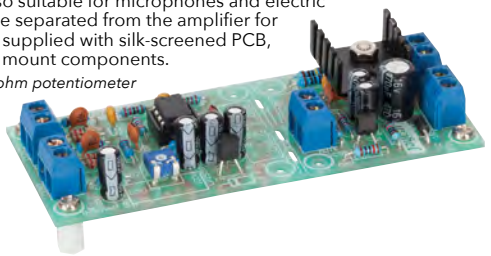
	Cat.	Qty 1+	Qty 5+
Kit	KC5152	$10.95	$9.45
Recommended Box - UB5	HB6015	$3.45	$3.10

'The Champion' Audio Amplifier Kit with Pre-Amplifier

Refer: Silicon Chip Magazine January 2013

An amplifier and pre-amplifier combination for all those general-purpose audio projects. It uses the AN7511 audio IC to deliver 2W music power into 8 ohms from a 9 to 12V supply. Features low distortion, two inputs (mixed 1:1), over-temperature protection (auto-limiting), mute and standby control. Pre-amplifier is also suitable for microphones and electric guitars, and can be separated from the amplifier for individual use. Kit supplied with silk-screened PCB, heatsink and PCB mount components.

Note: Optional 10k ohm potentiometer for external volume control use RP7610



Specifications	KC5519
Operating Voltage Range	4 - 13.5VDC
Output Power	up to 4W
Music Power	3W @ 9 - 12V
Signal-To-Noise Ratio	65dB
Frequency Response	-2.5dB @ 20Hz, -0.2dB @ 20kHz
Thd+N	1kHz: 0.25%
Gain	34dB for Amplifier, up to 58dB with pre-amplifier
Input Sensitivity For Amp Only	52mV RMS @ 5V, 125mV RMS @ 9 - 12V
Input Sensitivity For Amp & Pre-Amp	2mV RMS @ 5V, 5mV RMS @ 9 - 12V
Quiescent Current	2mA (Pre-amplifier) + 30-60mA (Amplifier)
Standby Current	2mA (Pre-amplifier) + 1-10uA (Amplifier)
PCB	101x41mm

	Cat.	Qty 1+	Qty 5+
Kit	KC5519	$24.95	$22.45

1 Watt Audio Amplifier

This tiny PCB measuring only 28 x 28mm incorporates all the electronics for a 1 Watt amplifier. 4 to 12VDC operating voltage, 50mV input sensitivity, 8 ohm output and 20 to 25000Hz output frequency. Optional connection for a 10k ohm - 100k ohm logarithmic potentiometer (not included) for adjustable volume control.

- PCB and components
- 9VDC (use MP3146)
- PCB: 41 x 24mm

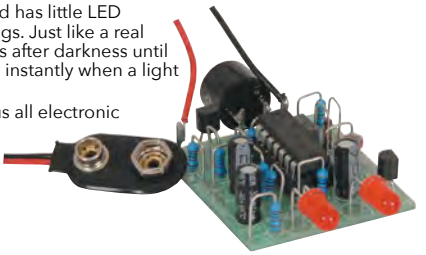
	Cat.	Qty 1+	Qty 5+
Kit	KG9032	$9.95	$8.75
9VDC Plugpack To Suit	MP3146	$18.95	$16.95

AUDIO EFFECTS KITS

Clifford The Cricket

Refer: Silicon Chip Magazine Dec 1994

Clifford hides in the dark and chirps annoyingly until a light is turned on - just like a real cricket. Clifford is created on a small PCB and has little LED insect eyes that flash as it sings. Just like a real cricket, it waits a few seconds after darkness until it begins chirping, and stops instantly when a light comes back on.



- PCB, piezo buzzer, LDR plus all electronic components supplied
- PCB: 41 x 36mm

	Cat.	Qty 1+	Qty 5+
Kit	KC5178	$17.95	$15.95

Theremin Synthesiser Kit MkIII

Refer: Silicon Chip Magazine Jan 2018

Originally invented in 1919 using valve technology, and as featured on the soundtrack for the 1951 film "The Day the Earth Stood Still", the all "new" completely transistorised Theremin will give you a truly retro sound.

This kit is easy to build with everything incorporated into one circuit board. Also, most components, the switch, the pot and the power socket are mounted on the circuit board to eliminate messy wiring; the use of on board voltage regulation to suit an AC power supply eliminates the noise that results from modern switch mode power supplies; and it can also be powered by an external 12 volt battery.

We'll be honest, it is tricky to play and generally suits someone experienced with string instruments like a violin (Leon Theremin himself was a cello player), but with a little practice you can play some basic tunes, or just use it to make eerie sci-fi sound effects.

	Cat.	Qty 1+	Qty 5+
Kit	KC5537	$99.95	$89.95

HOUSEHOLD KITS

Liquid Level Sensor

When two contacts are shorted by liquid, an LED will illuminate. Use in applications such as an overflow alarm and rain detector. Connect Relay Card KG9142 for a relay output to operate lights, sirens or other warning devices.

- Project requires 9VDC
- Kit supplied with Kwik Kit PCB and all electronic components
- PCB: 45 x 15mm

	Cat.	Qty 1+	Qty 5+
Kit	KG9138	$9.95	$8.75
Recommended Box - UB5	HB6015	$3.45	$3.10

VISUAL EFFECTS KITS

Jacob's Ladder MK3

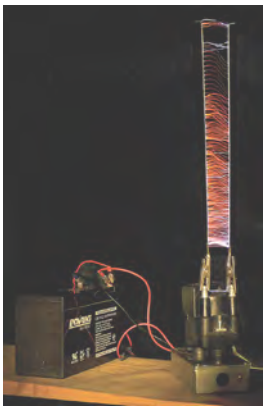
Refer: Silicon Chip Magazine February 2013

A spectacular rising ladder of bright and noisy sparks for theatre special effects or to impress your friends. This improved circuit has even more zing and zap than it's previous design from April 2007 and requires the purchase of a VS Commodore 12V ignition coil (available from auto stores and parts recyclers). Kit supplied with silk-screened PCB, diecast enclosure (111 x 60 x 30mm), per-programmed PIC, PCB mount components and pre-cut wire/ladder.

- Powered from a 12V 7Ah SLA or 12V car battery

Note: Battery not included.

WARNING: THE JACOB'S LADDER KIT USES POTENTIALLY DANGEROUS VOLTAGE.



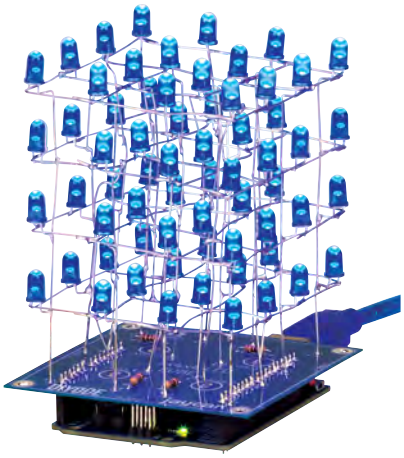
	Cat.	Qty 1+	Qty 5+
Kit	KC5520	$69.95	$62.95

Build a Blue LED Cube 4 x 4 x 4 - Learn to Solder Kit

As described in the May 2020 DIYODE magazine

Build and marvel at your own programmable LED cube. This kit turns sixty-four blue LEDs, circuit board, a handful of components, and an Arduino® UNO compatible board (XC4410 sold separately) into an animated 4x4x4 LED cube. Once you have successfully soldered the cube together, plug it into your favourite Arduino® UNO compatible board and watch the LEDs alternate between fifteen different patterns. We also include instructions to program your own patterns. Tools and soldering required.

Note: Arduino® UNO board not included



	Cat.	Qty 1+	Qty 3+	Qty 6+
Kit	KM1097	$19.95	$17.95	$15.95

AUTOMOTIVE KITS

Car Battery Monitor

Refer: Electronics Australia May 1987

Don't get caught with a flat battery! This simple electronic voltmeter lets you monitor the condition of your car's battery so you can act before getting stranded. 10 round 5mm LEDs tell you your battery's condition.

- Kit includes PC board and all components
- PCB: 62 x 39mm

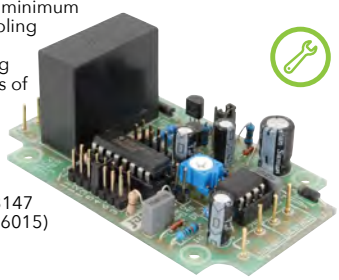
	Cat.	Qty 1+	Qty 5+
Kit	KA1683	$19.95	$17.70
Recommended Box - UB5	HB6015	$3.45	$3.10

The 'Flexitimer'

Refer: Electronics Australia March 1991

Now in it's third revision by Jaycar, the Flexitimer uses a 555 timer coupled with a binary counter to create a simple and consistent timing circuit. In the original one-shot mode the timer will count up to the set point and switch the relay once. In the additional interval mode the timer will continue switching the relay at each recurrence of the set point. The circuit can be set at 11 time points with the minimum being 7 seconds and each step doubling the time to a maximum of 2 hours. Other times are possible by changing components C1, R1, and R2. Features of the third revision include a restarting the one-shot mode from an external switch or signal, a more energy efficient design, & space on the PCB for terminal blocks (not included).

- Requires 12- 15V DC (use Cat. MP3147 plugpack) / Optional UB5 case (HB6015)
- PCB Dimensions: 74 x 47mm

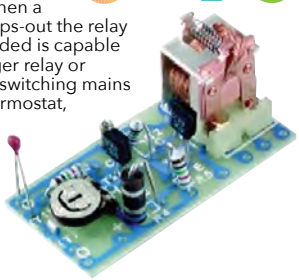


	Cat.	Qty 1+	Qty 5+
Kit	KA1732	$24.95	$22.45
12VDC Plugpack To Suit	MP3147	$18.95	$16.95
Recommended Box - UB3	HB6013	$4.50	$4.05

Temperature Switch

Ideal for turning fans or heaters on at certain temperatures. This kit operates a relay when a preset temperature is exceeded and drops-out the relay when temperature drops. The relay included is capable of switching small currents only, so a larger relay or switching device should be employed if switching mains voltages or heavy currents. Ideal as a thermostat, ice alarm, hydroponics applications, etc. A small trimpot is used to adjust the cutout temperatures for the relay in the range of approx -30 to +150° C.

- PCB, NTC thermocouple and components
- 12VDC, 100mA
- PCB: 56 x 28mm



	Cat.	Qty 1+	Qty 5+
Kit	KG9140	$24.95	$22.35
12VDC plugpack to suit	MP3147	$18.95	$16.95
Recommended Box - UB5	HB6015	$3.45	$3.10

POWER KITS

12VDC Relay Card

Add a relay output to your equipment.

This kit will close a relay's contacts with as little as 5mA to trigger the circuit. Literally any kit you see on these pages that uses an LED as a trip-condition indicator, can be used with this nifty project. Use the relay to sound buzzers, switch on lights, operate solenoids, trigger alarms, etc.

- Operation: common ground - output LED to ground
- Kit includes Kwik Kit PCB, relay plus electronic components
- PCB: 45 x 17mm

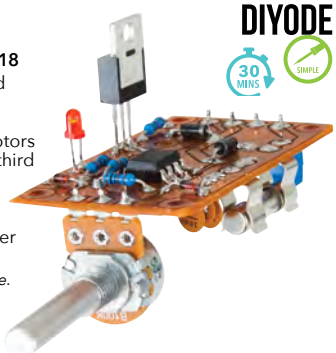
	Cat.	Qty 1+	Qty 5+
Kit	KG9142	$12.95	$11.35

5A 12VDC PWM Motor Speed Controller Kit

Refer: Diyode Magazine March 2018

This kit is a "bare bone" motor speed controller for fairly low current, low voltage applications. It is ideal, for example, to control small robotic motors or pump motors. It costs about one third of the more sophisticated PWM (Pulse-Width-Modulated) controller kits shown elsewhere in this section (although these kits are higher current capacity).

Note: image shown is DIYODE's prototype. The kit includes a solder-masked and silkscreened PCB.



	Cat.	Qty 1+	Qty 5+
	KD6102	$16.95	$14.95

POWER KITS CONTINUED

Universal +/- 15VDC 1A Power Supply Regulator

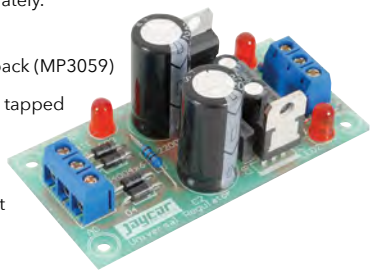
Refer: Silicon Chip Magazine March 2011

This is an upgraded version of the original universal power supply kit published in August 1988. One small board and a handful of parts will allow you to create either a regulated ±15V rail or +15VDC single voltage from a single winding or centre tap transformer (not included). Substitute different regulators to these supplied and you can alter the output voltage to your requirements. Upgrades in this design include improved parts layout and terminal blocks for inputs and outputs. Kit includes PCB and all components for 15 volt versions, transformer sold separately.

PCB: 72 x 30mm

Power Supply Options:

- ±15V rails from 15V AC plug pack (MP3059) or transformer (MM2002)
- ±15V rails from 30V AC centre tapped transformer (MM2007)
- +15VDC from a single or centre tap transformer
- Different voltages using 78xx and 79xx series regulators (not included)



	Cat.	Qty 1+	Qty 5+
Kit	KC5501	$17.95	$15.95
15VAC Transformer To Suit	MM2002	$12.50	$11.00
30VAC CT Transformer To Suit	MM2007	$9.95	$8.95

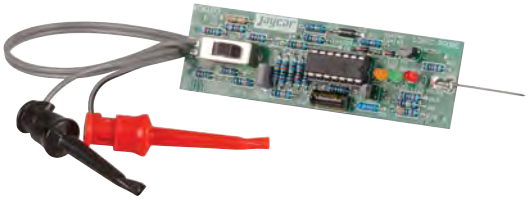
TEST EQUIPMENT

Logic Probe Kit

DIYODE

Refer: Diyode Magazine Oct 2017

This logic probe will help you diagnose and troubleshoot your 3.3V or 5V circuits, including Arduino® and Raspberry Pi projects. It indicates a logic low or logic high state on the green and red LEDs, and shows a shift between states on the orange LED. There is also a switch for TTL or CMOS circuits. Kit supplied with double-sided screen printed PCB and specified parts. We've even thrown in the paperclip for the probe tip. You'll need to 3D print your own case though, for which you can download the print file from the DIYODE website.



	Cat.	Qty 1+
Logic Probe Kit	KD6100	$17.95

Digital Multimeter Kit

Learn everything there is to know about component recognition and basic electronics with this comprehensive kit. From test leads to solder, everything you need for the construction of this meter is included together with a detailed manual. With test questions and schematic supplied in the manual, the kit can be geared to an individual or class learning environment, making it an excellent choice for first year trade apprentices. Kit includes DMM case, LCD, solder, battery, test leads, PCB, comprehensive 18 page learning manual and electronic components.

- All you'll need is a soldering iron
- Meter dimensions: 67(W) x 123(H) x 5(D)mm

	Cat.	Qty 1+	Qty 5+
Kit	KG9250	$29.95	$26.95

p.A54 - Huge Range of DMMs

USB Port Voltage Checker

Refer: Silicon Chip Magazine July 2013

An easy way to test a USB port to see if it is dead, faulty or incorrectly wired to help prevent damaging a valuable USB device you plan to connect. Voltage is indicated using three LEDs. The complete project can be protected using the supplied clear heatshrink tubing. Kit supplied with double sided, soldermasked and screenprinted PCB with SMDs presoldered, clear heatshrink, USB connectors and components for USB 2.0 & USB 3.0.

- PCB: 44 x 17mm

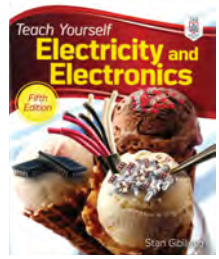
	Cat.	Qty 1+	Qty 5+
Kit	KC5522	$33.95	$29.45

BOOKS

Teach Yourself Electricity and Electronics

Comprehensive, straightforward and well-written, this book covers everything from atomic structure to DC & AC theory, semi-conductors, integrated circuits, digital electronics & communications. Each chapter has a quiz at the end so you can test your knowledge. One of the best entry-level self-teaching textbooks on electronics we've ever seen.

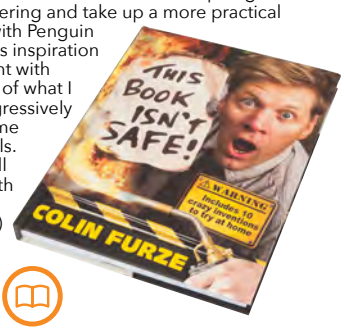
- Softcover. 734 pages with illustrations
- 232 x 190mm



	Cat.	Qty 1+
	BM7108	$69.95

This Book Isn`t Safe - Colin Furze

In the words of YouTuber and Author Colin Furze: In my 10 years making crazy inventions and madcap projects on the internet I've been inspiring people young and old to get into engineering and take up a more practical life. So with this in mind I've teamed up with Penguin to create a book for kids that will carry this inspiration and help them work up to being confident with tools and materials that is the foundation of what I do.There will be 10 projects that get progressively more challenging for you to create at home that are low cost and need only basic tools. As well as these DIY projects the book will cover some of my favourite inventions with pictures and cartoons so even those that don't like a lot of words (my younger self) can enjoy this to the max. 192 pages.



Great for beginners

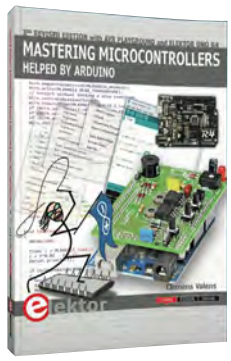
	Cat.	Qty 1+
This Book Isn`t Safe - Colin Furze	BM7146	$29.95

Mastering Microcontrollers Helped By Arduino®

The aim of this book is not only to let you enter the World of Arduino®, but also to help you emerge victorious and continue your microcontroller programming learning experience by yourself. In this book theory is put into practice on an Arduino® board using the Arduino® programming environment. Having completed this fun and playful course, you will be able to program any microcontroller, tackling and mastering I/O, memory, interrupts, communication (serial, I²C, SPI, 1-wire, SMBus), A/D converter, and more. For this second edition, the author has designed a versatile printed circuit board that can be stacked on an Arduino® board. The assembly can be used not only to try out many of the projects presented in this book but also allows for new exercises that in turn provide the opportunity to discover new techniques.

This book is for you if you are:

- A microcontroller novice
- An Arduino® user (enthusiast, artist, etc.) wishing to deepen your knowledge
- An electronics graduate or undergraduate student
- A teacher looking for inspiration
- Soft cover, 380 pages
- 209(L)x139(W)mm



	Cat.	Qty 1+
	BM7144	$79.95

BOOKS CONTINUED

Elektor Python 3 Programming and GUIs 2nd Edition

This is the second edition of a book aimed at engineers, scientists and hobbyists who want to interface PCs with hardware projects using graphical user interfaces. Desktop and web based applications are covered. The programming language used is Python 3 which is one of the most popular languages around: speed of programming being a key feature.The book has been revised and updated with emphasis on getting the user to produce practical designs with ease - a text editor is all that is required to produce Python programs.Hardware interfacing is achieved using an Arduino® UNO as a remote slave. A full description and source code of the communication interface is given in the book. The slave provides digital and analogue input and outputs. Multiple UNOs can be included in one project with all control code written in Python and running on a PCOne project involves a PIC microcontroller with code provided that can be loaded into the PIC using the UNO. The web applications and server are all implemented in Python allowing you to access your electronic hardware over the Internet. The Raspberry Pi computer can be used as your web server.An introductory chapter is provided to get you started with using Linux. The book is written for use with Debian or variations including Mint or Ubuntu. All of the programs in the book are freely available, ready to use and experiment with by way of a download from Elektor.

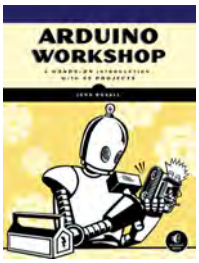
- Soft cover, 222 pages
- 235(L) x 170(W)mm

Cat.	Qty 1+
BT1381	$59.95

Arduino® Workshop Book - 65 Projects

In Arduino® Workshop you will learn to make projects that add-on to your Arduino® microcontroller platform. The book is very hands-on, describing 65 projects you can make. Lavishly illustrated with very clear text and lots of professional tips for the novice constructor.

Projects include a digital thermometer, GPS logger, handy voltage tester, keypad combination lock, a binary quiz game and much, much more



- Soft cover, 370 pages, 180 x 235mm

Great weekend projects

Cat.	Qty 1+
BM7137	$44.95

Arduino® Circuit & Projects Guide

From basic to more elaborate projects are covered, so that even students and teachers with some pre-existing technical knowledge will encounter new challenges. The skill and experience level required for these projects ranges from absolute beginner, to hobbyist-expert. Beginners will benefit from progressing through the book as they build their skills, while experienced readers will find it a useful handbook.

- Complex applications for advanced users
- Programming essentials
- Simple entry level projects
- Interface and hardware extensions
- Soft cover, 260 pages. 235 x 170mm

Cat.	Qty 1+
BM7142	$69.95

Programming Arduino®: Getting Started with Sketches

This entry level book explains what an Arduino® microcontroller actually is (i.e. a very small stand alone computer), introduces you to the Arduino® programming language (called, "C") and then describes the basic configurations of Arduino® modules. It then goes into the detail of getting Arduino®'s to deal with the real world, finishing with a discussion on C++ and more sophisticated applications.

- Soft cover, 162 pages, 138 x 215mm

Great for beginners

Cat.	Qty 1+
BM7133	$27.95

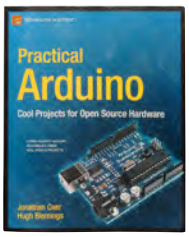
C Programming for Arduino®

Technology is constantly changing. New microcontrollers become available every year. The one thing that has stayed the same is the C programming language used to program these microcontrollers. If you would like to learn this standard language to program microcontrollers, then this book is for you!

	Cat.	Qty 1+
C Programming for Arduino® Book	BT1388	$69.95

Practical Arduino®

An indepth book that takes you beyond the basics quite quickly and shows you how to make up a typical application/design. Examples of typical projects, 14 in all are worked through, ranging from simple to quite complex. This is a necessity as it goes to the heart of Arduino®.



- Soft cover, 422 pages
- 235 x 190mm

Cat.	Qty 1+
BM7132	$54.95

Programming Android Apps

The book explains the operation of the Android OS in a clear step-by-step method. The book offers a wide range of applications based on hands-on examples, covering everything from simple math programs, reading sensors and GPS data, right up to programming for advanced Internet applications. Besides writing applications in the Java programming language, this book also explains how apps can be programmed using Javascript and PHP.

- Soft cover, 244 pages, 234x169x14mm

Cat.	Qty 1+
BT1382	$64.95

Arduino® + Android Projects For the Evil Genius

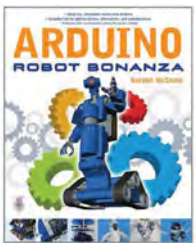
Not particularly evil, but another project oriented book written around Android-type mobile phones and the Arduino® microcontroller. You can, for example turn your Android phone into a Geiger counter, a TV remote controller, etc. Many projects use both the Arduino® and the Android culminating in the creation of a home Automation system.

- Soft cover, 197 pages, 215 x 275mm

Cat.	Qty 1+
BM7135	$49.95

Arduino® Robot Builder's Bonanza

This book guides you through the construction of 7 robots that roll, walk, talk, slither and even sling insults at you. All projects feature the Arduino® microcontroller platform. Step-by-step assembly diagrams and instructions provided.

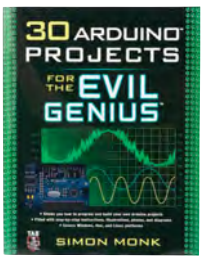


- Soft cover
- 400 pages, 230 x 185mm

Cat.	Qty 1+
BM7136	$54.95

30 Arduino® Projects for the Evil Genius

This is a practical project oriented book describing lots of projects based around the Arduino® microcontroller. Be warned, there is nothing intrinsically evil about this book. The title is a catchy marketing department trick. It does have, however, 30 practical projects which specify components which are mostly available from Jaycar. Hours & hours of evil fun.



- Soft cover, 191 pages, 220 x 275mm

Great for weekend projects

Cat.	Qty 1+
BM7134	$49.95

PROTOTYPING BREADBOARDS & JUMPER LEADS

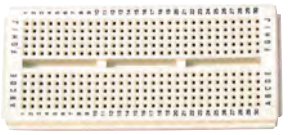
Mini Breadboard with 170 Tie Points

With self-adhesive tape on the back, it is ideal for DIY projects including Arduino®. It has 17 holes x 10. Total 170 holes. It can also be permanently mounted with screws (not included).

- Nubbins and slots on the sides to connect multiple breadboards together
- Dimensions: 46(L) x 35(W) x 9(H)mm
- Weight: 14g

Cat.	Qty 1+	Qty 5+
PB8817	$4.95	$4.45

Mini Breadboard with 300 Tie Points

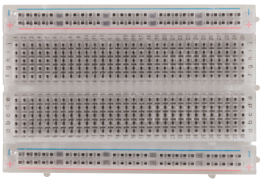


One terminal strip supplied which gives 30 holes x 10. Total 300 holes.

- Dimensions: 39(W) x 87(L)mm

Cat.	Qty 1+	Qty 4+	Qty 10+
PB8832	$12.95	$11.35	$10.35

Breadboard with 400 Tie Points



Mid-sized prototyping breadboard with 400 tie points.

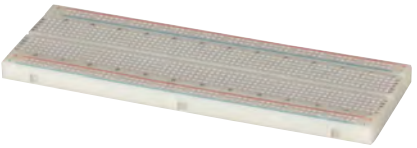
- 300 tie points in centre section
- 100 tie points on power rails
- Dimensions: 83(L) x 55(W) x 10(H)mm

Cat.	Qty 1+	Qty 5+	Qty 10+
PB8820	$7.95	$7.15	$6.35

Breadboard with 830 Tie Points

With labelled rows and columns and adhesive back for mounting, it is ideal for electronic prototyping and Arduino® projects.

- Tie points: 830
- Distribution holes: 200
- Terminal holes: 630
- Nubbins and slots on the sides to connect multiple breadboards together
- Dimensions: 165(L) x 54(W) x 9(H)mm, 74g



Cat.	Qty 1+	Qty 5+
PB8815	$14.95	$13.45

Breadboard - Large Scale

- 1660 tie points
- 400 distribution holes / 1280 terminal holes
- Mounted on a metal plate
- 3 banana terminals
- Rubber feet
- Dimensions: 157(W) x 237(H)mm
- Board size: 130(W) x 175(H)mm

Cat.	Qty 1+	Qty 4+	Qty 10+
PB8816	$46.95	$41.95	$36.95

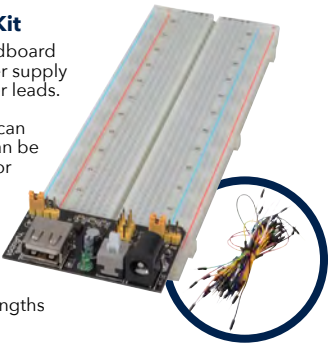
Acrylic Base for UNO and Breadboard

This compact acrylic board allows mounting an UNO (or Leonardo) and PB8820 sized breadboard to create an easy to use prototyping station.

- Measures 120mm x 83mm
- Self-adhesive rubber feet
- Plastic mounting screws for Arduino® board

Cat.	Qty 1+	Qty 4+	Qty 10+
PB8840	$12.95	$11.45	$9.95

Solderless Breadboard with Power Supply & Jumper Lead Kit

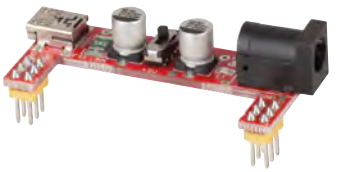


This kit comprises of a solderless breadboard with 830 connection tie-points, a power supply module and 64 pieces of mixed jumper leads. Ideal for circuit board prototyping and Arduino® projects. The power module can be plugged into the power rails and can be powered from either a 12V plug pack or from 5V using the USB socket, and has a switchable output between 3V and 5VDC.

- 1 x Solderless Breadboard with 830 Points
- 1 x Power Supply Module
- 64 mixed jumper wires of different lengths and colours

Cat.	Qty 1+	Qty 5+	Qty 5+
PB8819	$21.95	$19.45	$17.45

Breadboard Power Module



Receiving power from a USB socket or DC socket, this module adds a compact power supply to your breadboard.

- Plugs straight into most bread boards
- Can be set to 3.3V or 5V
- Concave design saves space
- Dimensions: 57 x 24 x 21mm

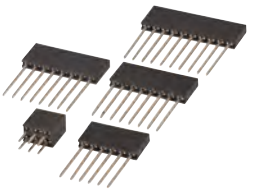
Cat.	Qty 1+	Qty 5+	Qty 10+
XC4606	$9.95	$8.75	$7.75

Stackable Header

Build a stackable shield, or make your current shield stackable with the Duinotech Stackable Headers. Alternatively, shorten the pins to make female headers just like the duinotech main boards.

Includes:

- 1 x 10-pin
- 2 x 8-pin
- 1 x 6-pin
- 1 x 2x3-pin (for ICSP)



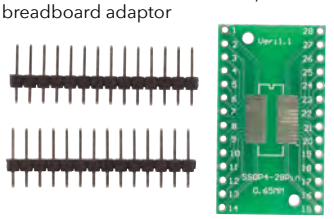
duinotech

Cat.	Qty 1+	Qty 4+	Qty 10+
HM3208	$4.95	$4.45	$3.95

28 Pin SOIC/SOP to DIP Breadboard Adaptor

More and more IC's are now only available as surface mount variants, making prototyping harder. The SMD breadboard adaptor allows SMD IC's and other smaller pitch components to be used with standard 0.1" prototyping equipment such as breadboard and protoboards.

- Suits 4-28 pin SOP/SOIC IC's (SOIC on one side, SOP on the other)
- 1.27mm pitch and 0.65mm pitch
- Header strip included



	Cat.	Qty 1+	Qty 10+	Qty 25+
28 pin SOIC/SOP to DIP Adaptor	PI6530	$2.95	$2.62	$2.35

Breadboard Jumper Kit

This kit consists of 70 pcs of single core sturdy wire which has been stripped on each end and bent at right angles.

- Specifically made for breadboards
- There are 5 pcs each of 14 different lengths

Cat.	Qty 1+	Qty 4+	Qty 10+
PB8850	$11.95	$10.45	$9.45

Economy Breadboard Jumper Kit

Solid core hookup cable, which is the ideal size for breadboards. Cut it to whatever lengths you require and strip the ends.

- 2 metres each of 5 colours (Colours may vary from time to time.)

	Cat.	Qty 1+	Qty 4+	Qty 10+
Per Pack	WH3032	$4.50	$3.95	$3.60

PROTOTYPING BREADBOARDS & JUMPER LEADS

150mm Jumper Leads

A pack of 40 jumper leads of various colours for prototyping. Ideal for Arduino® and DIY projects. Each flexible lead is 150mm long with pins to suit breadboards or PCB headers.

- Pack of 40

	Cat.	Qty 1+	Qty 5+
Plug to Plug	WC6024	$5.95	$5.35
Socket to Socket	WC6026	$5.95	$5.35
Plug to Socket	WC6028	$5.95	$5.35

Jumper Lead Mixed Pack

A mixed pack of jumper leads for your Arduino®, breadboarding and prototyping projects.

- 30 Plug-Plug
- 40 Plug-Socket
- 30 Socket-Socket
- All 150mm long

	Cat.	Qty 1+	Qty 5+
100 Pieces	WC6027	$14.95	$13.45

20cm Pin to Alligator Clip Jumper Lead Set

These jumper cables with alligator clips are perfect for prototyping components where a breadboard isn't suitable. Alligator clips are insulated with rubber covers to avoid shorting when testing components with multiple clips.

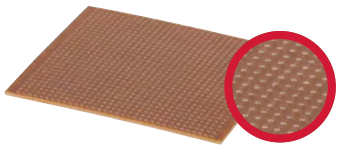
	Cat.	Qty 1+	Qty 4+	Qty 10+
10 Pieces	WC6032	$9.95	$8.95	$7.95

PCB EXPERIMENTING & PROTOTYPING

PC Boards - Vero Type Strip

Alphanumeric grid, pre-drilled 0.9mm, 2.5mm spacing.

- Dimensions:
  95mm wide x 3 handy lengths



	Cat.	Qty 1+	Qty 4+	Qty 10+
75mm	HP9540	$5.50	$4.95	$4.40
152mm	HP9542	$8.95	$8.05	$7.15
305mm	HP9544	$12.95	$11.45	$9.95

Universal Pre-Punched Experimenter's Boards

The low cost way to build prototype or one-off projects. We now stock 3 sizes of phenolic board that has a matrix of punched holes on 0.1" (2.5mm) pitch with 'donut' of tin plated copper around each hole. Finally the non-solder side of the board has an alphanumeric grid printed on it to assist in the component identification board layout.

SMALL - HP9550

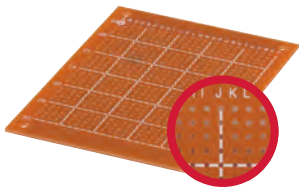
- 95 x 72mm, 25 x 30 holes (750)
- 3.6mm edge pitch.

MEDIUM - HP9552

- 140 x 95mm, 29 x 50 holes (1450)
- 3.6mm edge pitch.

LARGE - HP9554

- 210 x 78mm, 24 x 67 holes (1608)
- 3.6mm edge pitch.



	Cat.	Qty 1+	Qty 4+	Qty 10+
Small	HP9550	$4.95	$4.45	$3.95
Medium	HP9552	$7.50	$6.75	$6.00
Large	HP9554	$9.95	$8.95	$7.95

Unclad Punched Laminate

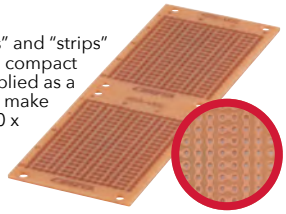
A single 150(L) x 70(W)mm strip of phenolic punched at 0.1" (2.5mm) grid with NO laminate (copper) on either side.

	Cat.	Qty 1+	Qty 4+	Qty 10+
	HP9562	$6.95	$6.25	$5.55

Ultra Mini Experimenter's Boards

20 holes deep by 16 holes wide with "links" and "strips" (bus rails) every 2 holes. Board measures a compact 65 x 45mm and is extremely versatile. Supplied as a pair, end-to-end. Can be snapped apart to make two boards (dimensions above) or one 130 x 45mm 0.3" wide x 0.1" pitch.

- Ideal for DIL ICs in small numbers

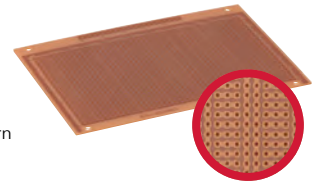


	Cat.	Qty 1+	Qty 4+	Qty 10+
	HP9556	$5.95	$5.35	$4.75

IC Experimenter's Board

You can fit dozens of DIL ICs on this board. 30 holes deep x 50 holes wide, with a "link"/"strip" (bus rails) pattern enabling alternate V+ and earth rails. Very versatile.

- Alphanumeric markings on grid pattern
- Dimensions: 140 x 95mm



	Cat.	Qty 1+	Qty 4+	Qty 10+
	HP9558	$8.95	$8.05	$7.15

Spot Face Cutter for Strip Boards

The spot face cutter is designed to neatly remove the copper strip on strip type prototyping boards. Insert the tool in the pre-drilled hole and rotate it until the track is removed entirely. Easy to use and much more efficient than other methods.

- Dimensions:
  Handle: 60(L) x 17(W) x 17(D)mm
  Total Length: 110mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
	TD2461	$8.95	$8.25	$6.95

Breadboard Layout Prototyping Boards

A prototyping board that lets you transfer your breadboard design without having to rework it. Includes five holes on each side per row and power rails running the length of the board.

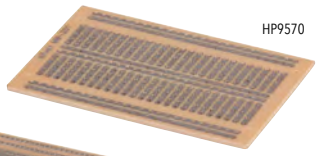
Two sizes to choose from.

SMALL:

- 25 rows
- 400 holes
- Similar layout to PB8820
- 73mm x 47mm x 1.4mm

LARGE:

- 59 rows
- 862 holes
- Similar layout to PB8815 Breadboard
- 155mm x 58mm x 1.4mm



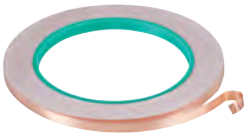
HP9570

HP9572

	Cat.	Qty 1+	Qty 4+	Qty 10+
400 hole	HP9570	$4.95	$4.45	$3.95
862 hole	HP9572	$9.95	$8.95	$7.95

Copper Tape with Adhesive Backing

- Solderable
- Repair printed circuit boards
- Create antennas and shielding
- 5mm x 25m



	Cat.	Qty 1+	Qty 4+	Qty 10+
25m	NM2870	$6.95	$6.25	$5.55

Pressboard Insulation Material

Similar to Presspahn Elephantide®, this product is a heavily pressed craft-type board which is used as an insulator in mains products. It can be scored, folded and formed into many shapes, particularly into boxes or partitions to isolate mains circuits from fingers. It has good abrasion resistance and is often used in areas where chafing from vibration can occur.

- Thermal Rating: 150°C
- Dielectric Strength: 12kV/mm
- Sheet thickness: 0.8mm
- Sheet dimensions:
  225(H) x 208(W)mm

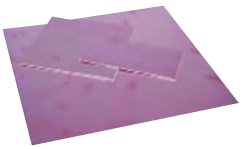
	Cat.	Qty 1+	Qty 4+	Qty 10+
	HG9985	$4.95	$4.45	$3.90

PCB MAKING

Blank Fibreglass PCB

Pure copper bonded to quality fibreglass base.

- HP9514, 9512, 9510 are single sided
- HP9515 is double sided



		Cat.	Qty 1+	Qty 4+	Qty 10+
150x75	Single Sided	HP9514	$5.95	$5.25	$4.75
150x150	Single Sided	HP9512	$8.95	$7.95	$6.95
150x150	Double Sided	HP9515	$9.95	$8.75	$7.75
300x300	Single Sided	HP9510	$24.95	$22.45	$19.95

Etch Resistant & Waterproof Pen

The ink from the pen is etch-resistant so you have a quick and simple way of making a PCB! Being waterproof it is also great for labeling things on or about the boat, caravan or motor home. The ink will wash off afterwards with metho, turps, etc.

- Excellent smudge-proof and waterproof qualities
- Dries in seconds
- Low-odour ink
- Xylene and toluene-free ink
- Line width fine approx. 0.6mm

	Cat.	Qty 1+	Qty 4+	Qty 10+
Blue	TM3002	$6.95	$6.25	$5.55

PCB Etching Kit

An ideal kit for anyone needing to etch a circuit board - complete with an assortment of copper boards, etchant, working bath and tweezers. It also includes a positive acting photosensitive PCB and developer.

Supplied with:

1 x Plastic bath to accept PCBs up to 180 x 110mm
1 x Photosensitive single sided PCB
1 x Sachet of positive developer for Riston
1 x 100g sachet of sodium persulphate etchant
1 x Plastic tweezers
Assortment of PCB's, instructions

	Cat.	Qty 1+	Qty 4+	Qty 10+
	HG9990	$29.95	$26.95	$23.95

PROTOTYPING ACCESSORIES

Polymorph Pellets

Polymorph will change the way you make parts. It's a commercial grade thermoplastic that softens enough to be formed into any shape at around 62 - 65° C. You simply heat the pellets in hot water. It hardens at room temperature to form a tough plastic material similar in consistency and colour to nylon. It can be drilled, sanded, ground, machined, painted or heated and reformed again and again. Endless uses in model making, craft, single part manufacture, prototyping, engineering, science, lab and more.

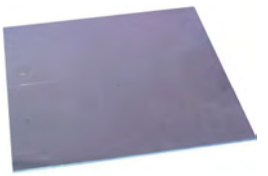
- Supplied in a 100g bag of 3mm pellets.

This car was moulded in minutes using a car baking tin!

	Cat.	Qty 1+	Qty 4+	Qty 10+
	NP4260	$12.95	$11.45	$9.95

Aluminium Sheet

18 gauge.



	Cat.	Qty 1+	Qty 4+	Qty 10+
295 x 295mm	HM9500	$17.95	$15.95	$13.95

p.A36 - Metal Bending Pliers

Ammonium Persulphate 250g

The alternative to Ferric Chloride. Mix one part etchant with 5 parts hot water to etch copper board. Contents will etch about 300sq/cm.

- 250 grams

	Cat.	Qty 1+	Qty 4+	Qty 10+
250g	NC4258	$11.95	$10.45	$9.45

PCB Wash Defluxing Solution

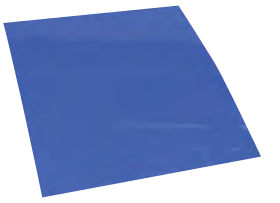
Removes flux and residue from circuit boards to provide an extremely clean and contaminant free surface. The ready to use solution can be safely used in ultrasonic tanks for various applications including: jewellery, metal parts degreasing, removing flux and cleaning sensitive electronic parts. Appropriate for both static and ultrasonic cleaner use.

- Non-flammable
- Water- based (Biodegradable)

	Cat.	Qty 1+	Qty 4+	Qty 10+
1 Litre Bottle	NA1070	$14.95	$13.45	$11.95

Press 'n' Peel Film

This is by far the easiest way to make Printed Circuit Boards from CAD software or magazine PCB layout artwork. You simply make the PCB image by putting a Press 'n' Peel sheet of transfer film in the paper tray of a photocopier or laser printer (The sheet size is almost the same as the A4 paper tray). You then print or copy the PCB track image onto the film. Using a domestic clothes iron you press the image onto a precleaned piece of copper clad PCB. The image transfers to the copper and the image will not etch away. Ammonium persulphate or ferric chloride are both OK. You get 5 sheets of 215 x 280mm transfer film in each pack. Full instructions are supplied.



4 Easy Steps:

1. Print or Copy
2. Iron on
3. Peel off
4. Etch

	Cat.	Qty 1+	Qty 4+	Qty 10+
	HG9980	$39.95	$35.95	$31.95

Etch Your Own PC Boards Booklet

Need just one or two printed circuit boards, for a magazine project or a prototype for your latest design? It's not too hard to etch your own single sided or even double sided boards, especially if you have access to a photocopier or a PC and laser printer. In this tech update we tell you all you need to know.

	Cat.	Qty 1+
	BI8212	$2.00

Perspex - Red

- 3mm thick
- Supplied with peel-off film

		Cat.	Qty 1+	Qty 4+	Qty 10+
Red	195 x 195mm	HM9505	$14.95	$13.45	$11.95

Clear Acrylic Sheet

General purpose clear acrylic (Perspex) sheet for hobby use. Suitable for displays etc.

- Supplied with peel-off protection film

	Cat.	Qty 1+	Qty 4+	Qty 10+
195 x 195 x 3mm	HM9509	$14.95	$13.45	$11.95

CONDUCTIVE COMPOUNDS

Wire Glue

A soldering iron in a jar. Wire Glue is a electrically conductive adhesive that enables you to make solder-free connections when you don't have a soldering iron handy, or can't apply heat for some reason. Hundreds of hobby, trade and electronics uses. Lead-free, cures overnight.

	Cat.	Qty 1+	Qty 4+	Qty 10+
9ml	NM2831	$9.95	$8.75	$7.75

Conductive Carbon Grease

Lubricates and improves electrical and thermal connections between sliding surfaces, while providing protection from moisture & corrosion. Excellent for use on switches and EMI shielding applications. Industrial, trade and hobby use. 50 gram tube.

- Prevents normally closed switches from corroding in place
- Reduces make-break arcing and pitting of switch contact surfaces
- Improves the connection between irregular or pitted contact surfaces
- Reduces EMI noise by maintaining a continuous path between conductive surface
- Thermally stable up to 200°C
- Density: 2.7 g/ml
- Electrical resistivity: 117 ohms/cm

p.A171 for Heatsink Compound

	Cat.	Qty 1+	Qty 4+	Qty 10+
50g	NA1034	$11.95	$10.45	$9.45

Stainless Steel Conductive Thread 2m

A highly flexible thread made conductive by the inclusion of stainless steel strands. You can feel the extra weight that the stainless steel gives. The thread is a dark silvery grey, and is great for adding electrical elements to textiles such as fabric.

- Maximum current 500mA
- Tie onto modules and components to make a connection
- 2m length per pack

	Cat.	Qty 1+
2m	WW4100	$8.95

Precision Conductive Ink

This is a highly conductive polymer for use in a variety of applications and is an indispensable tool for fixing damaged circuit board tracks. Apply instant traces on most surfaces (epoxy, glass, plastic, metal). Draw traces on circuit boards, repair defective traces, make jumpers and shield electronics, design prototype circuits and repair rear-window heater traces.

- 1mm track trace width
- 0.02 Ohm per mm resistivity

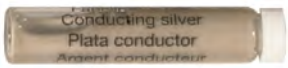
After heat curing only. Use low temperature soldering (less than 180°C/350°F) for not more than 5 seconds. Use low temperature soldering iron.

	Cat.	Qty 1+	Qty 4+	Qty 10+
	NS3033	$39.95	$35.95	$31.95

Silver Conductive Varnish

This silver conductive varnish adheres well to glass, PCB material, ceramics etc. Repairs printed circuits, window antennas, window alarm loops etc. Very good conducting properties.

- Approximately 0.02 - 0.1 Ohms/cm^2



	Cat.	Qty 1+	Qty 4+	Qty 10+
	NS3030	$13.95	$12.55	$11.15

Soldering Tools
Jaycar has the biggest range of soldering tools around.
Types range from USB powered, low voltage, 240 powered and gas. We also have a large range of solder and accessories.
See page A20 onwards to see the great range.

CLEANING / REPAIR PRODUCTS

Inox Premium Grade Machinery Grease

General-purpose synthetic grease in a handy 30gm tube size. Ideal for bearings, ball joints, chains, sprockets, O-rings, bushes & other rubber and plastic etc.

- Food grade
- High temperature, non-melt
- Highly resistant to water, salt, chemicals and drying
- Fully synthetic

	Cat.	Qty 1+	Qty 4+	Qty 10+
30g	NA1032	$11.95	$10.45	$9.45

Deoxit ProGold Contact Cleaner & Rejuvenator

Simple cleaners wash away dirt, grime, and dust from your expensive equipment but are often ineffective at cleaning tough oxidation and metal sulphide contamination. This product will not only clean, but it will help restore your equipment to its original condition, improving its performance.

Kit contains:

- DeoxIT power booster 7.4ml
- DeoxIT ProGold conditioning treatment 7.4ml
- 2 x brush applicators
- 4 x swabs
- Lint free cloth

	Cat.	Qty 1+	Qty 4+	Qty 10+
Kit	NS1436	$29.95	$26.95	$23.95

ANTI-CORROSION

Tef-Gel Anti-Corrosion, Anti-Seizing, Anti-Galling Syringe

This product is far superior to a similar product we sold last year. Its main use is to prevent dissimilar metals when fastened together from corroding due to galvanic action. For example, you fasten down a stainless steel sail track slide to the metal deck of a yacht; you use this product to prevent dissimilar metal electrolytic corrosion. That's all the other product was good for. This product also stops rotating objects from seizing and prevents galling in stainless steel screw fasteners. It also protects electrical terminals/ connectors.

- Will not cold flow or dry out
- Is resistant to salt water and detergents
- Has an indefinite shelf life
- Contains PTFE (Teflon®) and NO (0%) volatile solvents, no silicone, or petroleum solvents. Nothing to evaporate
- It is dielectric (Non-electrical conducting)
- No known hazardous ingredients
- High flashpoint
- Non toxic

	Cat.	Qty 1+	Qty 4+	Qty 10+
10ml	NA1040	$24.95	$22.45	$19.95

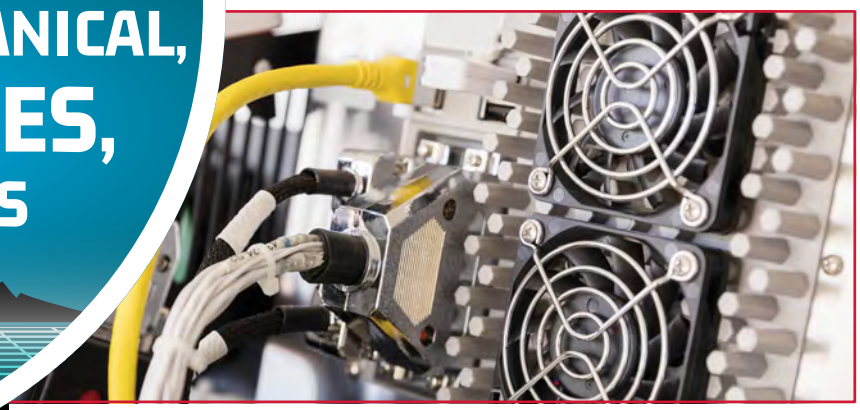
Corrosion Buster Pen

This pen-type product enables you to remove rust, spot corrosion and clean burnt contacts etc, without abrasion utilising the 20,000 tiny glass fibres at the tip of the pen. It has an amply sized body with finger indent to provide a comfortable & secure grip while the adjustable length allows for more aggressive cleaning when required.

- 120mm long x 14mm dia

	Cat.	Qty 1+	Qty 4+	Qty 10+
	NA1410	$24.95	$22.45	$19.95

ELECTROMECHANICAL, ENCLOSURES, TRANSFORMERS ETC



ELECTROMECHANICAL:

Buzzers	A169
Circuit Protection	A150
Fans	A172
Heatsinks	A170
Mains Transformers	A183
Relays	A148
Switches	A158

ENCLOSURES:

ABS Enclosures	A178
Instrument Cases - ABS	A177
Metal Enclosures	A182
Metal Instrument Cases	A181
Plastic Enclosures	A177
Rack Systems	B251

TRANSFORMERS:

EL Core	A184
Miniature	A185
Speaker	A185
Strobe Trigger	A185
Toroidals	A183

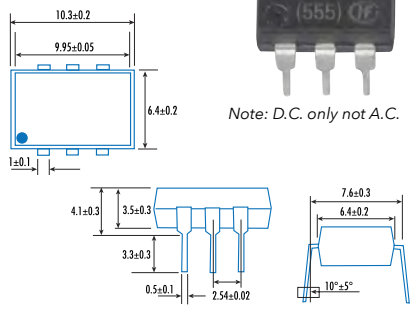
SOLID STATE RELAYS:

Solid state relays are particularly useful when only low switching currents are available, such as those presented by CMOS or TTL circuits. Optically isolated for optimum safety, these relays use solid state components rather than mechanical switches. AC types offer safe and easy switching of 230V mains.

PCB Mount Solid State DIL Relay

Able to be triggered from low currents, and a super small package. Low on resistance and very low quiescent current.

Note: D.C. only not A.C.

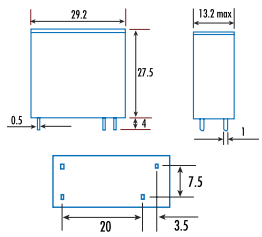


Specifications	SY4090
Must Release Current	0.4mA
Must Operate Current	5mA
Maximum Load Voltage	60VDC
Maximum Load Current	500mA
Package	6 pin DIL

Voltage	Current	Cat.	Qty 1+	Qty 10+	Qty 25+
5V	500mA	SY4090	$6.95	$6.25	$5.55

PCB Mount Solid State Relays, Low Current

Low profile PCB mounting solid state relays with LED input status indication. Suitable for applications such as I/O interfaces and programmable logic controllers.



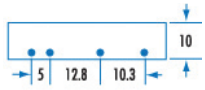
SY4092

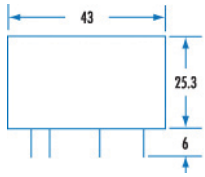
SY4093

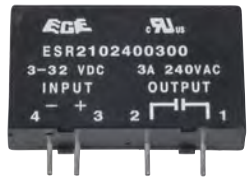
Specifications	SY4092	SY4093
Control Voltage Range	4 - 6VDC	9.6 - 14.4VDC
Max. Input Current	20mA	20mA
Load Voltage	3 - 52.8VDC	3 - 50VDC
Load Current	0.01 - 2A	0.01 - 2A

Voltage	Current	Cat.	Qty 1+	Qty 10+	Qty 25+
5VDC	2A	SY4092	$8.95	$8.05	$7.15
12VDC	2A	SY4093	$8.95	$8.05	$7.15

Mains Type







Specifications - Output	SY4080
Max Load Current	3A
Nominal Line Voltage	240VAC
Load Voltage Range	24-280VAC
Min. Blocking Voltage	600VAC
Max One-Cycle Surge Current	80A
Min. Load Current	50mA
AC Current	3A max

Specifications - Input	SY4080
Control Voltage	3-32VDC
Control Current	15mA Max
Min. Turn Off Voltage	1VDC
Input Resistance	2.2kΩ min

Voltage	Current	Cat.	Qty 1+	Qty 10+	Qty 25+
3-32VDC	3A	SY4080	$24.95	$22.45	$19.95

SOLID STATE RELAYS CONTINUED

Chassis Mount Solid State Relays, High Current

Both look similar but are in fact quite different.

SY4084 40A, 240VAC TRIAC Type

This unit has a dielectrically isolated D.C. control input that controls a 40amp TRIAC. This means that you can control AC mains up to 40A RMS. It also means that it will not control D.C. For that you need the SY4086 below.

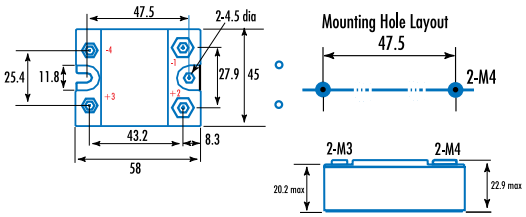
Specifications for SY4084

- Dielectric isolation rating 4000VAC
- Opto isolated control, 4V min, 32V max (D.C.)
- TRIAC controlled AC out. 48-280VAC
- Built-in snubber
- RoHS compliant

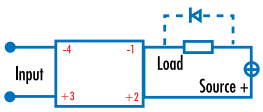
SY4084

SY4086 100A, 0-30VDC MOSFET Type

This unit has a dielectrically isolated D.C. control input to switch a MOSFET which can control loads of up to 100A @ 30VDC. It will not switch AC. To switch AC use the SY4084. NB: Mechanical details same for both units. Advantages of SY4086. Switching high current D.C. was previously accomplished by high current contactors. Contactors quickly wear out plagued by arcing of the actual contacts. There is no arcing with MOSFETS and their very low ON-resistance (in this case 3.5 milliohms) ensures little wasted energy.



*Fast recovery diode**



DC Output Solid State Relay Schematic.

**The diode is required to prevent back EMF problems with inductive loads. The diode should be a fast recovery type with a PIV rating greater the VDC Power Supply.*

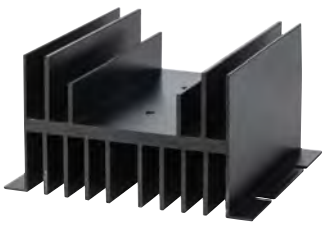
OUTPUT CIRCUIT	
Load Voltage	0-30VDC
Load Current	0.02-100A
Max On-State Resistance	0.0035Ω
Max On-State Voltage Drop	0.35V
Max Turn On Time	0.5ms
Max Turn Off Time	0.5ms
Max Surge Current	240A (10ms)
INPUT CIRCUIT	
Control Voltage	3-32VDC
Control Current	28mA max.
Min Turn Off Voltage	1.0VDC

Voltage	Current	Cat.	Qty 1+	Qty 10+	Qty 25+
240VAC (ONLY)	40A	SY4084	$49.95	$44.95	$39.95
30VDC	100A	SY4086	$49.95	$44.95	$39.95

HEATSINK TO SUIT SY4084/SY4086

Using this heat sink with the SY4084/SY4086 solid state relays assures you reach the full current capacity. Solid state relays become quite hot when used in a high current application is essential. Datasheet available on our website.

- Thermal resistance - 1.1°C/W
- Dimensions: 118(W) x 110(L) x 64 (H)mm



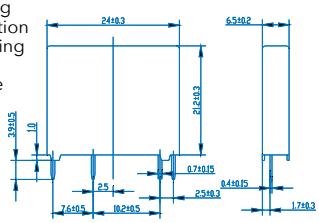
	Cat.	Qty 1+	Qty 10+	Qty 25+
Heatsink to suit	SY4085	$19.95	$17.95	$15.95

click & collect

Click and Collect is now available at all Jaycar stores! Simply place your order online and the team at your local store will get the order together for you, ready to collect in just 1 hour!

Slim 5V, 12V

- Ultra slim
- 2A switching
- Photo isolation
- 600V blocking voltage
- Sealed type



SY4088

Specifications	5VDC (SY4088)	12VDC (SY4089)
Dielectric Strength	20000VAC (1 minute)	20000VAC (1 minute)
Insulation Resistance	100MΩ (at 500VDC)	100MΩ (at 500VDC)
Operating Temperature	-30°C to +80°C	-30°C to +80°C
Input Ratings		
Control Voltage	4-6 VDC	9.6 - 14.4 VDC
Maximum Current	15mA	15mA
Voltage On	4V	4V
Current Off	1V	1V
Output Ratings		
Voltage (AC Power)	50 - 250VAC	50 - 250VAC
Maximum Current	2A	2A
Surge Current	30A	30A

Voltage	Current	Cat.	Qty 1+	Qty 10+	Qty 25+
5VDC	2A	SY4088	$9.95	$8.95	$7.95
12VDC	2A	SY4089	$9.95	$8.95	$7.95

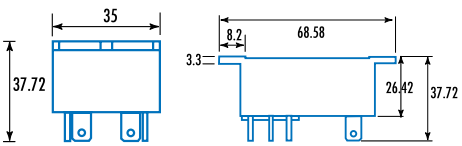
PANEL / CHASSIS MOUNT RELAYS

All feature rugged construction and quick connect terminals for easy installation.

24VDC or 240VAC, DPDT, 30A

Two models available. One with a nominal 240VAC coil and one with 24VDC coil.

- Contact Form: DPDT
- Contact Rating: 30A NO / 3A NC
- 24V Model Coil Resistance: 350 ohm
- 240V Model Coil Resistance: 3800 ohm @50Hz
- 1/4" (6.35mm) Q.C. tabs

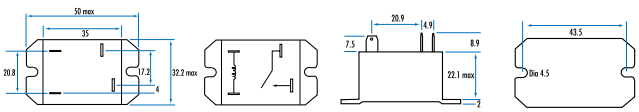


Voltage	Current	Contacts	Cat.	Qty 1+	Qty 10+	Qty 25+
24VDC	30A	DPDT	SY4041	$28.95	$25.95	$22.95
240VAC	30A	DPDT	SY4044	$29.95	$26.95	$23.95

12VDC, SPST 30A

- Contact Rating: 30A/240V
- QC tab termination - 4.8mm coil, 6.4mm contacts
- Used in heavy duty applications like air conditioning, heating etc
- Coil: 12V, 120 ohm
- 1/4" (6.35mm) Q.C. tabs

See website for full specifications.

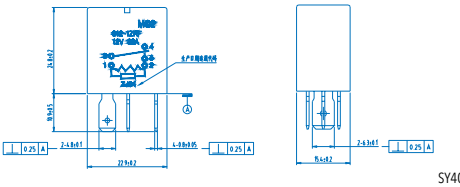


Voltage	Current	Contacts	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC	30A	SPST	SY4040	$9.95	$8.95	$7.95

AUTOMOTIVE RELAYS

Micro 30A Horn Relays

Extremely compact with a footprint of only 22 x 15mm, but maintaining high contact currents for automotive applications. Ideal for air horns, fog lamps or driving light installations. 30A rating on NO contacts, 20A on NC for both 12V and 24V types.



SY4045

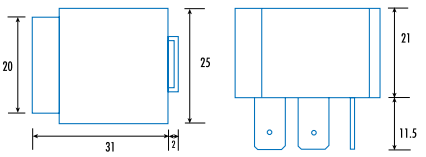
Not just for horns of course.

Voltage	Current	Contacts	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC	30A	SPST	SY4045	$7.95	$7.15	$6.35
12VDC	30A	SPDT	SY4046	$7.95	$7.15	$6.35
24VDC	30A	SPDT	SY4047	$7.95	$7.15	$6.35

Automotive Fused Relays - 15/30A

Designed for automotive applications, these quality relays have an integrated blade fuse (fuse included) and metal mounting bracket. SY4076 - 15A, ideal for aftermarket horns etc. SY4077 - 30A, suits high current accessories like fog lights, driving lights etc.

- QC tab termination 6.8mm (PT4507)

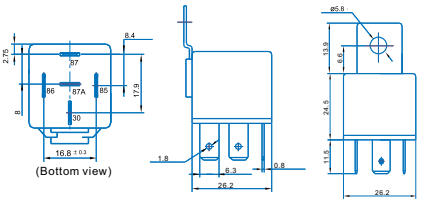


SY4076

Voltage	Current	Contacts	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC	15A	SPST	SY4076	$8.95	$7.95	$6.95
12VDC	30A	SPST	SY4077	$9.95	$8.75	$7.75

Automotive Horn Relay - 30A

Whilst designed for auto horns, this relay is ideal for any high current application. i.e. alarms, ignition cutout, transmitters, car spotlights etc. Contact voltage (nom) 12VDC. Nominal coil voltage 12VDC. QC tab termination.



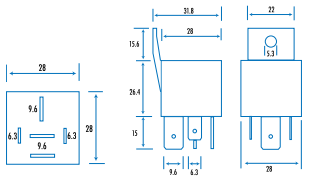
SY4068

p.A148 - our PCB mount version Cat. SY4072

Voltage	Current	Contacts	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC	30A	SPST	SY4068	$6.50	$5.85	$5.20
12VDC	30A	SPDT	SY4070	$6.95	$6.25	$5.55
Base to suit			SY4069	$5.95	$5.35	$4.75

Automotive Horn Relay - 60A SPDT

- Contact voltage (nom) 12VDC
- Nominal coil voltage 12VDC
- QC tab termination
- SPDT
- Heavy duty quick connectors required for 60A terminals use PT4717 Pkt. 4



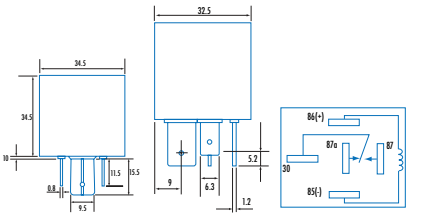
SY4074

Voltage	Current	Contacts	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC	60A	SPDT	SY4074	$12.95	$11.45	$9.95

Automotive Relay - 150A SPDT

150A contacts for ultra high power applications such as multiple lights, high power audio etc, in a small package.

- Contacts: SPDT
- Contact rating: 150A
- Coil resistance: 50 Ω
- Operate time: 10ms
- Operational life: 100,000 cycles
- Contact resistance: 30m Ω max
- Coil voltage: 12VDC
- Rated coil current: 240mA
- Release time: 5ms



SY4073

Voltage	Current	Contacts	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC	150A	SPDT	SY4073	$19.95	$17.95	$15.95

Universal LED Flasher Relays

Specifically designed to work with replacement low current LED indicator lights which may "hyper flash" when used with your cars standard flasher relay. This high frequency flashing will burn out the globe quicker. The minimum load is negligible (0.02A). Some cars will even display a burnt out bulb indicator even though it's working fine, this unit will remedy that issue.

- Nominal voltage: 12VDC
- Operating voltage: 11VDC-15VDC
- Flashing frequency: 90 times/minute +/-10%
- Silent operation
- Dimensions: 40(H) x 28(W) x 28(L)mm

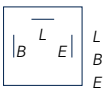
UNIVERSAL 2-PIN LED FLASHER RELAY

Switch current: 0.02A-10A
SY4016

JAPANESE CAR 3-PIN LED FLASHER RELAY

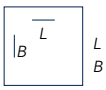
Switch current: 0.02A-20A
SY4018

SY4018



L = Load
B = 12V in
E = Ground

SY4016



L = Load
B = 12V in

1 YEAR WARRANTY

Type	Current	Cat.	Qty 1+	Qty 4+	Qty 10+
2 Pin	10A	SY4016	$14.95	$13.35	$11.70
3 Pin	20A	SY4018	$14.95	$13.35	$11.70

RELAY ACCESSORIES

Automotive Relay Base to suit Horn Relays

This is a plug in base with cable attached.

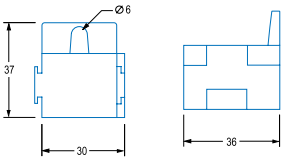
- Suits SY4068 & SY4070

MOST RELAYS ON THIS PAGE HAVE 1/4" (6.3MM) Q.C. CONNECTORS OR LARGER.

	Cat.	Qty 1+	Qty 10+	Qty 25+
150mm Long Leads	SY4069	$5.95	$5.35	$4.75

Interlocking Relay Socket with Leads

The easy and neat way to add multiple relays to your electrical system. These relay bases interlock together, can be panel mounted and take standard 5 pin automotive relays. They also come with integral flying leads as well as bare crimp terminals for customised termination.



	Cat.	Qty 1+	Qty 10+	Qty 25+
150mm Long Leads	SY4078	$8.50	$7.50	$6.75

CRADLE RELAYS

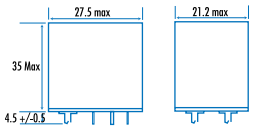
Cradle Relay - DPDT

PCB or DIN mount. Available in 12V or 24V coil.
- Contacts: 10A @ 220VAC/24VDC (resistive load)
- Contact Resistance: 50mΩ max.

12V COIL
- Resistance: 160Ω
- Current: 75mA

24V COIL
- Resistance: 650Ω
- Current: 37mA

Suitable Base: SY4064

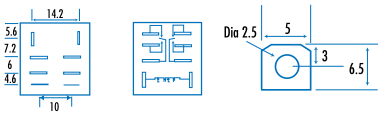


Voltage	Current	Contacts	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC	10A	DPDT	SY4008	$8.95	$8.05	$7.15
24VDC	10A	DPDT	SY4007	$8.95	$8.05	$7.15

Cradle Relay - DPDT

For heavy current switching for mains appliances eg. high power speakers.

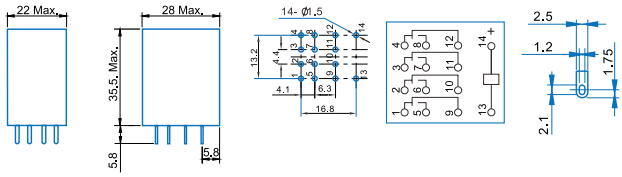
- Contact rated at 10A 240VAC
- Coil 12VDC 160 ohms
- Suitable base: Use SY4064 cradle
- NO/NC contacts
- DPDT contacts
- Dimensions:
  27(W) x 20(D) x 35(H)mm



Voltage	Current	Contacts	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC	10A	DPDT	SY4065	$8.95	$8.05	$7.15

Cradle Relay - 4PDT

- Rated Voltage: 12VDC
- Coil Resistance: 180Ω
- Contact Rating: 5A NO/NC contacts
- 27(W) x 21(D) x 35(H)mm excl pins
- Suitable base: SY4004



Voltage	Current	Contacts	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC	5A	4PDT	SY4009	$12.95	$11.45	$9.95

p.A117 - Power Solenoids

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DIN Rail Mount Relay Socket

DIN rail mounting base for SY4009. Also has 4mm holes so can be screw mounted to a chassis.
- Dimensions: 71(L) x 29(W) x 30(H)mm

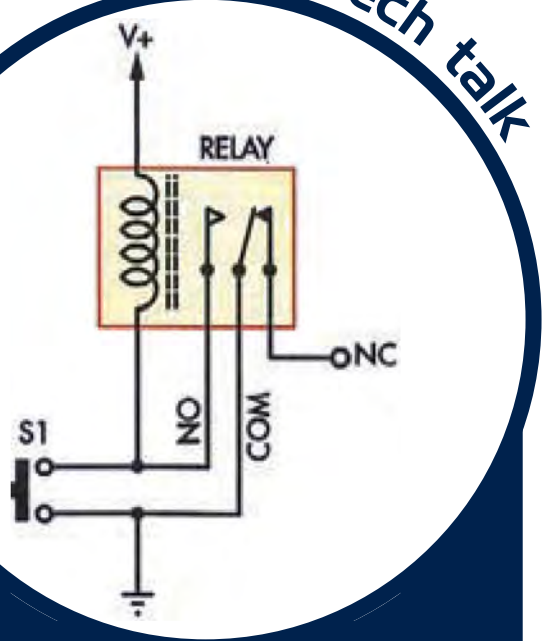
	Cat.	Qty 1+	Qty 10+	Qty 25+
Suits SY4009	SY4004	$9.95	$8.95	$7.95

Cradle Relay Base

Quality DIN rail mount with screw terminals.
- Suits SY4065
- Dimensions: 72(W) x 29(D) x 30(H)mm

	Cat.	Qty 1+	Qty 10+	Qty 25+
Suits SY4065	SY4064	$7.95	$7.15	$6.35

Tech talk



CONVERTING TO A LATCHING RELAY

How to turn an ordinary relay into latching type!

Sometimes you want to energise a relay to stay "on" instead of only momentarily staying on. For example you may want to make an electric motor, or a solenoid to stay on for some time.

You can do this with the circuit shown.

The key to this is a momentary push button switch (there are many in this catalogue.)

Pressing the push button switch (S1) activates the relay and closes the N O (Normally Open) and COM (Common) contacts. These contacts form a parallel connection across S1. Even if S1 is now opened, the relay will stay ON, or "latched."

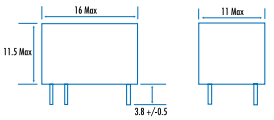
To turn the relay off, you must interrupt power to the coil, in other words, switch V+ off, even momentarily. Even if you switch V+ on again, the relay will remain off, until you push S1 again.

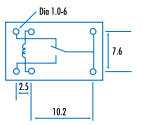
Note: While the relay is energized, it will continue to draw coil current. True mechanical latching relays do not do this.

STANDARD COIL / CONTACT RELAYS

DIL Type - 6V 1A Mini

- Extra low profile. 6VDC bobbin
- 56 ohm coil resistance
- 1A / 125VAC
- PCB mount
- Contact rating: 1 Amp
- SPDT
- Dimensions: 15 x 11 x 11(H)mm

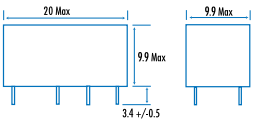


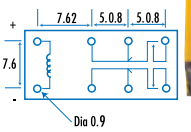


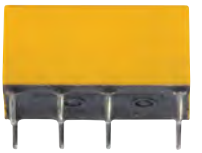
Voltage	Current	Contacts	Cat.	Qty 1+	Qty 10+	Qty 25+
6VDC	1A	SPDT	SY4058	$7.95	$6.95	$6.25

DIL Type - 12V 5A Mini

- 12 volt DPDT relay
- 12VDC coil (polarised)
- Max switching power 60W
- Dimensions: 20 x 10 x 10(H)mm
- High sensitivity 200mW pickup power
- Coil resistance 720 ohm
- 125VA
- PCB mount





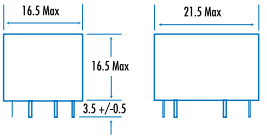


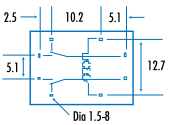
Note: Coil is polarised.

Voltage	Current	Contacts	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC	5A	DPDT	SY4059	$9.95	$8.75	$7.75

12V 1A DPDT

- Rated voltage - 12VDC
- Coil resistance - 400 ohm
- Dimensions: 21(W) x 16(D) x 15(H)mm
- Coil current - 30mA
- Contact rating: 1 Amp

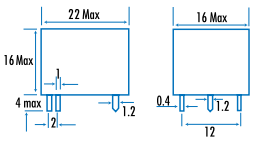


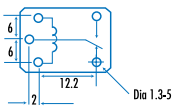


Voltage	Current	Contacts	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC	1A	DPDT	SY4061	$5.95	$5.35	$4.75

12V 10A SPDT

- Rated voltage - 12VDC
- Coil resistance - 400 ohm
- Power consumption: 360mW
- NO/NC contacts
- Coil current: 30mA
- Contact rating: 10 Amp
- Maximum switching current: 10A(AC) & 5A(DC)
- Dimensions: 18(W) x 15(D) x 14(H)mm

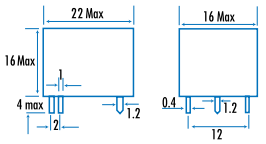


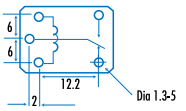


Voltage	Current	Contacts	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC	10A	SPDT	SY4066	$4.45	$3.95	$3.45

24V 10A SPDT

- Rated voltage: 24VDC
- Coil resistance: 1,600 ohm
- Power consumption: 360mW
- NO/NC contacts
- Coil current: 15mA
- Contact rating: 10A
- Max switching current: 10A(AC) & 5A(DC)
- Dimensions: 22(L) x 16(W) x 16(D)mm

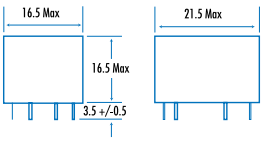


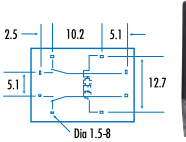


Voltage	Current	Contacts	Cat.	Qty 1+	Qty 10+	Qty 25+
24VDC	10A	SPDT	SY4067	$4.45	$3.95	$3.45

12V 5A DPDT

- Extra heavy duty mini relay
- Coil current - 30mA
- Contact rating - 5 Amp
- Dimensions: 21(W) x 16(D) x 15(H)mm
- Rated voltage 12VDC
- Coil resistance - 400 ohm
- Power consumption - 360mW
- NO/NC contacts



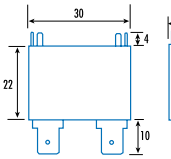


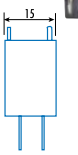
Voltage	Current	Contacts	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC	5A	DPDT	SY4062	$5.95	$5.25	$4.75

12V 20A SPST PCB Mount Relay

PCB mounting 12V relay with QC lug terminals mounted conveniently on top of case. What a good idea!

- Coil voltage: 12VDC
- Coil resistance: 275Ω
- Contact current: 20A@24VDC max
- Coil current: 44mA
- Contacts: SPST
- Dimensions: 30(L) x 22(W) x 15(H)mm



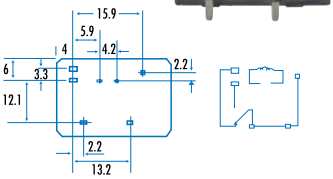


Voltage	Current	Contacts	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC	20A	SPST	SY4029	$8.95	$7.95	$6.95

12V 30A SPDT - Standard Size (Horn Relay)

PCB version of standard 30A horn type relay. Whilst designed for auto horns, this relay is ideal for any high current application i.e. burglar alarms, ignition cutout, transmitters, car spotlights etc.

- Contact current (max) 40A
- Nominal coil voltage 12VDC
- Contact voltage (nom) 12VDC
- PC Pin termination



Voltage	Current	Contacts	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC	30A	SPDT	SY4072	$7.45	$6.50	$5.75

12V 2A DPDT Latching

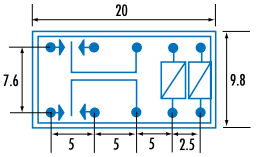
DIP style - will plug into 16 pin IC socket. Low profile. Highly sensitive - 180mW nominal power consumption.

Specifications Coil

- 2 coil latching - 12VDC
- Minimum set and reset power 180mW
- Nominal set and reset power 360mW

Specifications Contact

- Max switching power 60W, 125VA
- Max switching voltage 220VDC, 250VAC
- Max carrying current 2A @ 30VDC, 1A @ 120VAC
- Dimensions: 20(W) x 10(D) x 10(H)mm



Voltage	Current	Contacts	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC	2A	DPDT	SY4060	$12.95	$11.35	$10.35

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SPECIAL PC MOUNT RELAYS

Special PC Mount

Silver alloy contacts

- Telecoms grade

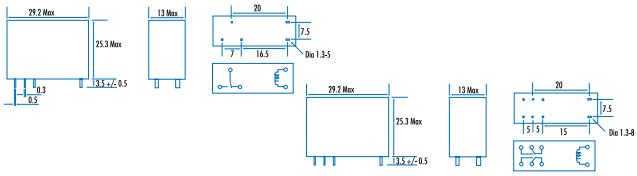
SPDT - 12/24VDC

- Coil 270 ohm - 12VDC - SY4050
- Coil 1100 ohm - 24VDC - SY4051
- 10A @ 30VDC or 10A @ 240VAC contact rating

DPDT - 12/24VDC

- Coil 270 ohm- 12VDC - SY4052
- Coil 1100 ohm- 24VDC - SY4053
- 2 x 5A @ 30VDC or 2 x 5A@240VAC contact rating
- Dimensions: 29(W) x 12(D) x 25(H)mm

SY4050

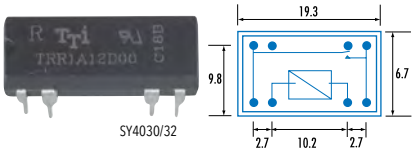


Voltage	Current	Contacts	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC	10A	SPDT	SY4050	$7.95	$6.95	$6.25
24VDC	10A	SPDT	SY4051	$8.95	$7.75	$6.95
12VDC	5A	DPDT	SY4052	$8.95	$7.95	$6.95
24VDC	5A	DPDT	SY4053	$9.95	$8.75	$7.75

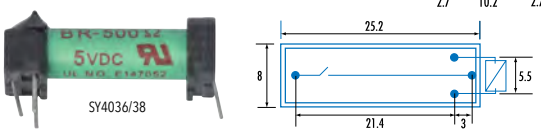
RELAYS - DIP

Reed Relays

Reed relays are highly sensitive and reliable. SY4030/32 fit a 14 pin IC socket. Both types are SPST, Normally Open.



SY4030/32



SY4036/38

Specifications	SY4030	SY4032	SY4036	SY4038
Coil Resistance	500Ω	1000Ω	500Ω	1050Ω
Nominal Voltage	5V	12V	5V	12V
Rated Current	10mA	12mA	20mA	11.4mA
Pickup Voltage	3.75VDC	9.0VDC	3.5VDC	8.4VDC
Dropout Voltage	0.8VDC	1.0VDC	0.5VDC	1.2VDC
Contact Rating	0.5A	0.5A	1A	1A

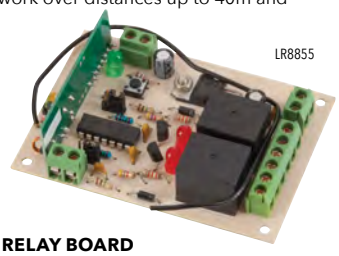
Voltage	Current	Contacts	Cat.	Qty 1+	Qty 10+	Qty 25+
5VDC	10mA	SPST	SY4030	$4.75	$4.15	$3.75
12VDC	12mA	SPST	SY4032	$4.75	$4.15	$3.75
5VDC	20mA	SPST	SY4036	$3.95	$3.45	$3.15
12VDC	11.4mA	SPST	SY4038	$3.95	$3.45	$3.15

REMOTE CONTROL RELAYS

Multi Channel Remote Control Relay Boards

Add remote control functions to a new project or existing installation with these handy remote control relay boards. Available with 2 or 4 channels, each output relay is controlled by a separate button on the key fob controller. Each channel can be set to momentary or latching mode allowing you to customise the setup to suit your application. Operating on the robust 433MHz band the key fob remotes work over distances up to 40m and feature rolling code transmitting for added security.

- Selectable momentary or latching mode for each channel
- Transmission frequency: 433MHz
- Transmission range: 40m max
- Operating Voltage: 12VDC
- Relay contact rating: 28VDC 10A max / 250VAC 5A max



LR8855

2 CHANNEL REMOTE CONTROL RELAY BOARD

- Current draw: 50mA
- Board dimensions: 85(L) x 61(W) x 20(H)mm
- Remote dimensions: 51(L) x 34(W) x 13(D)mm

Cat. LR8855

LR8856

SPARE 2 CHANNEL KEY FOB CONTROLLER

Cat. LR8856

4 CHANNEL REMOTE CONTROL RELAY BOARD

- Current draw: 80mA
- Board dimensions: 90(L) x 73(W) x 20(H)mm
- Remote dimensions: 63(L) x 40(W) x 13(D)mm

Cat. LR8857

LR8857

SPARE 4 CHANNEL KEY FOB CONTROLLER

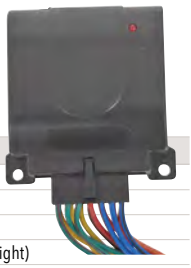
Cat. LR8858

LR8858

	Cat.	Qty 1+	Qty 2+	Qty 4+
2 Channel RC Relay Board	LR8855	$54.95	$48.95	$43.95
2 Channel Keyfob	LR8856	$18.95	$16.95	$14.95
4 Channel RC Relay Board	LR8857	$74.95	$66.95	$59.95
4 Channel Keyfob	LR8858	$22.95	$20.45	$17.95

Wireless 4 Ch Relay Receiver (12V Nominal Operation)

This unit, which can be operated with the 2 x remotes (supplied), will control up to 4 x relays in Normally Closed or Normally Open configuration as either Momentary or Latched operation (the relays are built-in to the receiver). The relay contacts are rated at 5A at 14VDC. If higher voltage or higher power (or both) switching is needed, simply get these relays to operate a higher power relay. Strictly speaking for simple control applications, the LR8824 is all you need.

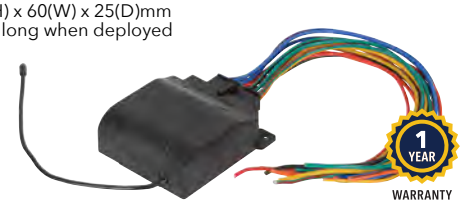


Specifications	LR8824
Power Input	10 - 15VDC
Current Draw	350mA max
Standby Current	<10mA
Transmission Distance	30m typical (300m+ max line of sight)
Transmission Frequency	433.92MHz
Transmitter Features	SAW locked, rolling-code, water-resistant.
Learning Capacity	250 remotes per module.
Outputs	4 x NO/NC contacts individually selectable as momentary or latched
Relay Contacts	5A max at 14VDC
Receiver Dimensions	68(H) x 60(W) x 25(D)mm, Antenna 1 50mm long when deployed

ADDITIONAL WIRELESS RELAY TRANSMITTER UNIT

Capable of controlling the LR8824 with up to 4 control voltage inputs. You could, for example, have an input on channel 1, which would be from say a micro-switch connected to a window or a gate in a shed or barn. The LR8819 will transmit a signal (100m minimum, up to 400m line-of-sight) to the LR8824 to raise an alarm. It will also accept USB type voltage signals etc. It will accept positive or negative voltage commands (it will operate without the remote controls). Essential for fixed system monitoring.

- Unit measures 68(H) x 60(W) x 25(D)mm
- Antenna is 150mm long when deployed



	Cat.	Qty 1+	Qty 2+	Qty 4+
Wireless 4 Channel Relay Receiver	LR8824	$99.95	$89.95	$79.95
Additional Wireless Relay Transmitter	LR8819	$44.95	$39.95	$35.95
Spare Remote to suit LR8824	LR8829	$24.95	$22.35	$19.70

M205 FUSES - 20 X 5MM

M205 Fast Blow

SF2148

100mA	Cat. SF2148	**1A**	Cat. SF2158	**4A**	Cat. SF2164
160mA	Cat. SF2152	**1.25A**	Cat. SF2159	**5A**	Cat. SF2166
200mA	Cat. SF2153	**1.6A**	Cat. SF2161	**6.5A**	Cat. SF2167
250mA	Cat. SF2154	**2A**	Cat. SF2160	**8A NEW**	Cat. SF2165
315mA	Cat. SF2155	**2.5A**	Cat. SF2169	**10A**	Cat. SF2168
500mA	Cat. SF2156	**3A**	Cat. SF2162		
800mA	Cat. SF2157	**3.15A**	Cat. SF2163		

Quantity breaks for one type only.

Cat.	Qty 1+	Qty 10+	Qty 25+
All Types / Each	$0.75	$0.60	$0.49

M205 Slow Blow

Slow blow M205 size glass fuses.
- Rated voltage 250VAC
- Dimensions 20(L) x 5(Dia)mm

SF2170

500mA	Cat. SF2170	**2A**	Cat. SF2174	**4A**	Cat. SF2175
1A	Cat. SF2172	**3A**	Cat. SF2176	**5A**	Cat. SF2178
1.5A	Cat. SF2173	**3.15A**	Cat. SF2177	**10A**	Cat. SF2179

Cat.	Qty 1+	Qty 10+	Qty 25+
All Types / Each	$1.45	$1.15	$0.90

Quantity breaks for one type only.

M205 Ceramic Fast Blow

These fuses are used in microwave ovens and precision equipment. They are fast acting and rapidly respond to a fault condition. They are sand filled and their interrupting capacity is 1500A at 240VAC.

1.0A	Cat. SF2104	**3.15A**	Cat. SF2105	**6.3A**	Cat. SF2110
1.6A	Cat. SF2106	**4.0A**	Cat. SF2108	**8A**	Cat. SF2112
2.5A	Cat. SF2107	**5.0A**	Cat. SF2109	**10A**	Cat. SF2114

Quantity breaks for one type only.

Cat.	Qty 1+	Qty 10+	Qty 25+
All Types / Each	$1.50	$1.20	$0.95

M205 Ceramic Slow Blow

1.0A	Cat. SF2115	**4A**	Cat. SF2118
1.6A	Cat. SF2116	**6.3A**	Cat. SF2119
2.5A	Cat. SF2117	**8A**	Cat. SF2121

Quantity breaks for one type only.

Cat.	Qty 1+	Qty 10+	Qty 25+
All Types / Each	$1.85	$1.45	$1.20

M205 Fuse Packs

40 FUSES

The economical way to buy fuses.

Consists of:
5 x 500mA
10 x 1A
10 x 2A
5 x 3A
5 x 5A
5 x 10A

Cat.	Qty 1+	Qty 10+	Qty 25+
SF2242	$14.95	$13.45	$11.95

What does "AG" mean? Automotive Glass

3AG FUSES - 1 1/4" X 1/4"

3AG Fast Blow (32 x 6.35mm)

SF2182

100mA	Cat. SF2182	**1.5A**	Cat. SF2192	**7.5A**	Cat. SF2202
150mA	Cat. SF2184	**2A**	Cat. SF2194	**10A**	Cat. SF2204
250mA	Cat. SF2186	**3A**	Cat. SF2196	**15A**	Cat. SF2206
500mA	Cat. SF2188	**4A**	Cat. SF2198	**20A**	Cat. SF2208
630mA	Cat. SF2189	**5A**	Cat. SF2200	**25A**	Cat. SF2210
1A	Cat. SF2190	**7A**	Cat. SF2201		

Quantity breaks for one type only.

Cat.	Qty 1+	Qty 10+	Qty 25+
All Types / Each	$0.75	$0.60	$0.49

3AG Ceramic Fast Blow

These fuses are used in microwave ovens and precision equipment. They are fast acting and rapidly respond to a fault condition. They are sand filled and their interrupting capacity is 1500A at 240VAC.

7A	Cat. SF2120	**8A**	Cat. SF2122	**10A**	Cat. SF2124

Cat.	Qty 1+	Qty 10+	Qty 25+
All Types / Each	$1.50	$1.20	$0.95

3AG Slow Blow

Slow blow 3AG size glass fuses.
Rated voltage 250VAC.
Dimensions: 30(L) x 6(Dia)mm

SF2226

1A	Cat. SF2226	**3A**	Cat. SF2230	**7.5A**	Cat. SF2233
1.5A	Cat. SF2227	**4A**	Cat. SF2231	**10A**	Cat. SF2234
2A	Cat. SF2228	**5A**	Cat. SF2232		

Quantity breaks for one type only.

Cat.	Qty 1+	Qty 10+	Qty 25+
All Types / Each	$1.45	$1.15	$0.90

3AG Fuse Packs

40 FUSES

The economical way to buy fuses.

Consists of:
4 x 500mA
8 x 1A
6 x 1.5A
4 x 2A
6 x 3A
4 x 5A
4 x 7.5A
4 x 10A

Cat.	Qty 1+	Qty 10+	Qty 25+
SF2240	$14.95	$13.45	$11.95

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SPECIAL APPLICATION FUSES

GOLD 5AG FUSES - 3/8" X 1/2"

Gold Fuseholder With Mounting Bracket

Gold contacts and will accept both 8GA & 4GA cable. A mounting bracket is incorporated.
Length 80mm - accepts 5AG fuses.

AMP-KING

Type	Cat.	Qty 1+	Qty 4+	Qty 10+
5AG	SZ2060	$12.95	$11.45	$9.95

5AG Gold Fuses

These fuses suit our fuseholders. Gold plated ends - and the inside conductor is also gold.
• Fuse size 38(L) x 10(Dia)mm

AMP-KING

Current	Cat.	Qty 1+	Qty 4+	Qty 10+
20A	SF1970	$2.50	$2.25	$2.00
30A	SF1972	$2.50	$2.25	$2.00
40A	SF1974	$2.50	$2.25	$2.00
50A	SF1976	$2.50	$2.25	$2.00
60A	SF1978	$2.50	$2.25	$2.00

WAFER FUSES & HOLDERS

GOLD ANL WAFER FUSES

These wafer fuses feature gold finish screw-down contacts for maximum current transfer and conductivity and are designed for really high current applications such as for car audio amplifiers, etc.
• Use with our SZ2075 - Inline Wafer Fuseholder
• 5 current ratings available

AMP-KING

Current	Cat.	Qty 1+	Qty 4+	Qty 10+
80A	SF1990	$7.95	$7.15	$6.35
100A	SF1992	$7.95	$7.15	$6.35
150A	SF1995	$7.95	$7.15	$6.35
200A	SF1997	$7.95	$7.15	$6.35
250A	SF1999	$7.95	$7.15	$6.35

ANL In-line Fuse Holder

A solid brass ANL inline fuse holder that is nickel plated. A great looking and functional fuse holder that is suitable for high end car audio installations.
• Dimensions: 95(L) x 50(W) x 36(H)mm

Cat.	Qty 1+	Qty 4+	Qty 10+
SZ2078	$14.95	$13.45	$11.95

FUSE WIRE

Fuse Wire

Includes 8 amp for lights and 15 amp for power. An essential item to store in the fuse box of older homes. Have it there when you need it.

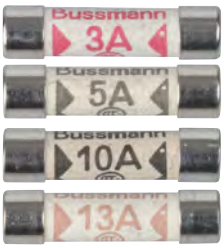
MADE IN

	Cat.	Qty 1+	Qty 10+	Qty 25+
Fuse Wire	SZ2005	$3.95	$3.55	$3.15

CERAMIC FUSES - 25 X 6MM

Ceramic Fuse 25 x 6mm Fast Blow

The range of BS1362 compliant fuses is designed to suit fused British power plugs. There's lots of other equipment that won't take an M205 or 3AG fuse, and this 25mm fuse lies in the middle of the range.
• Ceramic fuse with nickel-plated end caps
• 6000A interrupting capacity
• Four ratings available: 3A, 5A, 10A and 13A



Current	Cat.	Qty 1+	Qty 10+	Qty 25+
3A	SF2100	$1.50	$1.35	$1.20
5A	SF2101	$1.50	$1.35	$1.20
10A	SF2102	$1.50	$1.35	$1.20
13A	SF2103	$1.50	$1.35	$1.20

DMM FUSES - CERAMIC

Fast Acting Cartridge Fuses

As used in multimeters. Fast acting fuse designed for use in circuits with high AC fault current capacity. Listed by Underwriters Laboratories and certified by CSA.

SF2276 600V 1A
SF2272 500V 10A
SF2274 600V 15A

Spare ferrule fuses for our IP67 CAT IV rated DMMs:

SF2278 1kV 500mA
SF2279 1kV 800mA
SF2277 1kV 10A
SF2269 600V 500mA

SF2276

SF2277

SF2274

SF2279

Suits Fluke DMMs

Size(mm)	Cat.	Qty 1+	Qty 3+	Qty 6+
20 x 5.0	SF2269	$3.95	$3.55	$3.15
32 x 6.3	SF2279	$9.95	$8.75	$7.75
32 x 6.3	SF2278	$9.95	$8.75	$7.75
32 x 6	SF2272	$9.95	$8.75	$7.75
35 x 10	SF2276	$9.95	$8.95	$7.95
38 x 10	SF2274	$17.95	$15.95	$14.35
38 x 10	SF2277	$14.95	$13.35	$11.70

3AG FUSE BLOCKS

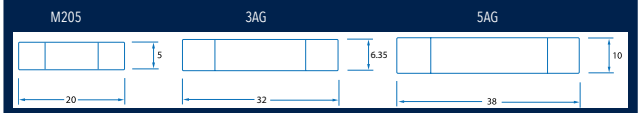
6 Way 3AG Fuse Block with Blown Indicators

Individual LEDs illuminate when fuses are blown so you can check things at a glance. The clear cover keeps everything protected and 60 stickers are included for common applications to assist with identification. Holds standard 3AG fuses.

Specifications	SZ2021
Operating Voltage	32VDC Max
Max Fuse Current	30A
Max Block Current	100A cumulative
Dimensions	129(H) x 91(W)mm

		Cat.	Qty 1+	Qty 4+	Qty 10+
6 Way	3AG	SZ2021	$44.95	$35.95	$28.95

FUSE DIMENSIONS

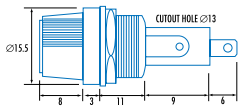


FUSE HOLDERS

PANEL FUSE HOLDERS

M205 - Low Volt Only

- Takes M205 fuses (20 x 5mm)
- Recommended for low voltage DC side circuits only
- Panel hole 13mm
- 6.3A 240V max

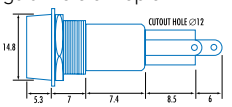


	Cat.	Qty 1+	Qty 10+	Qty 25+
M205	SZ2030	$2.25	$1.80	$1.45

M205 - Safe

Fuse retainer is released by simply depressing catch by inserting a screwdriver or any similar tool or object into the small rectangular hole on top of the fuseholder.

- Panel hole 12mm
- 6.3A 240V max

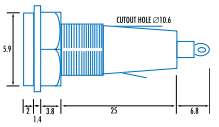


Cat.	Qty 1+	Qty 10+	Qty 25+
SZ2034	$2.75	$2.20	$1.75

M205 - Very Safe

6.3A 250V.

- Panel hole 11mm
- Fits M205 size fuses
- Screwdriver cover removal
- Fingers cannot touch metal inside

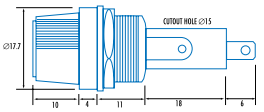


Cat.	Qty 1+	Qty 10+	Qty 25+
SZ2028	$2.95	$2.35	$1.90

3AG - Low Volt Only

10A 250V.

- Accepts 3AG fuses
- Panel hole 15mm
- Recommended for low voltage or DC side circuits only

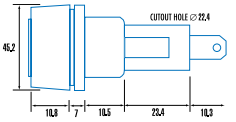


Cat.	Qty 1+	Qty 10+	Qty 25+
SZ2020	$2.25	$1.80	$1.45

3AG - Safe

Fuse retainer is released by simply depressing catch by inserting a screwdriver or any similar tool or object in to the small rectangular hole on top of the fuseholder.

- Panel hole 15mm
- 10A 250V

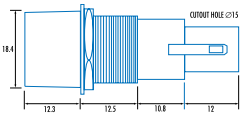


Cat.	Qty 1+	Qty 10+	Qty 25+
SZ2036	$2.75	$2.45	$2.15

3AG - Very Safe

3AG 10 amp 240V chassis mount (32 x 6.35 mm)

- Screwdriver cover removal
- Fingers cannot touch metal inside
- 10A 250V

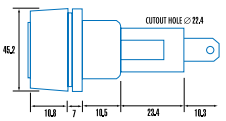


Cat.	Qty 1+	Qty 10+	Qty 25+
SZ2025	$2.95	$2.60	$2.30

5AG - Low Volt Only

Panel mounting fuse holder, screw cap style. Suits 5AG sized fuses up to 30A current rating.

- Low voltage only



Cat.	Qty 1+	Qty 10+	Qty 25+
SZ2029	$5.95	$4.75	$3.85

INLINE FUSE HOLDERS

3AG

Plastic in-line type.

- As used on car radios, CB, etc
- Takes 3AG fuses
- Low volt DC only
- 5A max

Cat.	Qty 1+	Qty 10+	Qty 25+
SZ2015	$1.95	$1.55	$1.25

3AG Moistureproof Fuseholder

Two rubber parts push together over the fuse to keep moisture out. Ideal for boats, cars etc.

- Cable needs to be soldered on, crimped to end parts.
- Could be made virtually waterproof with some silicone sealant
- Low volt DC only / 10A max

Cat.	Qty 1+	Qty 10+	Qty 25+
SZ2014	$2.95	$2.35	$1.90

3AG 20A High Current

If you want to fuse something higher than 5 amp you will need this holder.

- Super strong plastic holder
- Supplied with cable loop
- Simply cut and join to existing cables
- Low volt DC only

Cat.	Qty 1+	Qty 10+	Qty 25+
SZ2016	$3.75	$3.00	$2.40

5AG 60 Amp

For high-powered car sound systems.

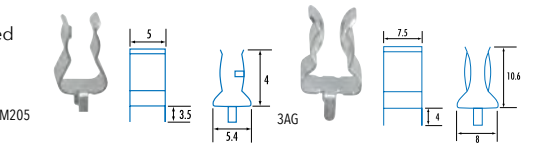
- Accepts 5AG fuse
- 80(L) x 19(D)mm
- Supplied with a small length of cable, simply cut and join in line
- Low volt DC only

Cat.	Qty 1+	Qty 10+	Qty 25+
SZ2065	$9.95	$7.95	$6.45

PCB MOUNT FUSE HOLDERS

Fuse Clips

- Nickel plated
- PCB mount



	Pkt	Cat.	Qty 1+	Qty 10+	Qty 25+
M205	8	SZ2018	$2.95	$2.35	$1.90
M205	100	SZ2019	$16.95	$13.45	$10.95
3AG	8	SZ2022	$2.95	$2.35	$1.90
3AG	100	SZ2023	$16.95	$13.45	$10.95

M205 PCB Mount Fuse Holder

PCB mounting M205 fuse holder. Supplied with screw cover to hold fuse in place.

- Max Fuse: 6.3A @ 250VAC

MOUNT	Cat.	Qty 1+	Qty 10+	Qty 25+
M205 Vertical	SZ2038	$3.75	$3.00	$2.40
M205 Horizontal	SZ2039	$3.75	$3.00	$2.40

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BLADE FUSE HOLDERS

30A In-Line Blade Fuse Holder

Accepts standard car type blade fuses. Supplied with heavy duty cable in a loop. Simply cut and join to existing cable.

- Low volt DC only

Type	Cat.	Qty 1+	Qty 10+	Qty 25+
Standard	SZ2040	$3.95	$3.15	$2.55

30A Panel Mount Blade Fuse Holders

Panel mount for auto or marine applications. Takes standard blade fuses, rated for 12VDC 30A max.

- Cover included
- Pack of 2

Type	Pack	Cat.	Qty 1+	Qty 10+	Qty 25+
Standard	2	SZ2046	$5.95	$4.75	$3.85

30A In-Line Blade Fuse Holder with Failure Lamp - Water Resistant

These accept ordinary blade fuses and have an integrated lamp that will light up when the fuse blows, making it easy to find the offending fuse. This is especially useful if the fuse is in a difficult or crowded location. They are supplied with 110mm leads and available to suit standard blade and mini-blade fuses.

- 30A max rating
- Ideal for circuits up to 32VDC

Type	Cat.	Qty 1+	Qty 10+	Qty 25+
Standard	SZ2042	$4.95	$4.45	$3.90
Mini Blade	SZ2043	$5.95	$4.75	$3.85

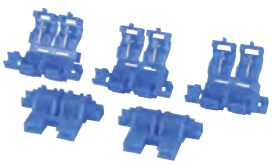
30A Blade Fuse Holder with Screw Terminals

This blade fuse holder with in-built screw terminals provides a simple wiring solution to situations where circuit protection is required.

- Current: 30A maximum
- Dimensions: 35(L) x 32(W) x 6(D)mm

Type		Cat.	Qty 1+	Qty 10+	Qty 25+
Standard	30A	SZ2044	$7.50	$6.00	$4.85

20A Self Crimping Blade Fuse Holder Pack



These are very simple blade fuse holders to install. The self crimping feature is easy to use and saves on installation time. No wire stripping or twisting required. No special tool required; just push in the wire and squeeze.

- Dimensions: 35(L) x 35(W)mm while open
- Voltage Rating 32VDC
- Current rating 20A

Type			Cat.	Qty 1+	Qty 10+	Qty 25+
Standard	20A	Pack of 5	SZ2049	$3.95	$3.55	$3.15

30A Waterproof Blade Fuse Holder with Long Transparent Cover

Quality transparent waterproof blade fuse holder. They are long enough to accept the circuit breaker blade fuse replacement models. The transparent cover allows you to inspect if a manual c/b has tripped, or able to see if an LED fuse has illuminated. This fuse holder provides extra protection against water and dust, ideal for marine applications.

- Dimensions: 65(L) x 25(W) x 15(D)mm

Type			Cat.	Qty 1+	Qty 10+	Qty 25+
Standard	30A	Waterproof	SZ2047	$7.95	$6.35	$5.15

30A Stackable Blade Fuse Holder (In-Line Style)

These fuseholders accept standard blade fuses. They slide together if more than one is required, so you could have a bank of these mounted in your car. They have a cap over the front which makes them look very neat and tidy.

- Handle 30 amps.
- Supplied with a wire loop - can be cut to suit
- Low volt DC only
- Dimensions: 41(L) x 24(H) x 10(W)mm

Type		Cat.	Qty 1+	Qty 10+	Qty 25+
Standard	30A	SZ2045	$4.95	$3.95	$3.20

6 Way Automotive Fuse Box

Fits six standard car blade fuses. Fibreglass reinforced nylon base with splashproof polycarbonate cover

- 32VDC max
- 15A/circuit max
- 45A/block max
- 6.3mm QC terminals
- Dimensions: 112(L) x 46(W) x 40(H)mm

Type		Cat.	Qty 1+	Qty 10+	Qty 25+
Standard	6 Way	SZ2002	$14.95	$13.45	$11.95

6 & 10 Way Blade Fuse Blocks

SZ2098

SZ2095

Convenient fuse blocks with integrated "fuse blown" indicator LEDs. The clear plastic cover allows you to quickly fault-find without disturbing your wiring. Includes quality bolt-down output connections for eye-terminals. Suitable for use in 12-24V systems, 30A max per fuse channel. Input cable up to 4-gauge. Uses standard automotive blade fuses, and includes a handy sheet of common labels, to make identification of connections even easier.

- Red LED "blown fuse" indicators
- Heavy duty bolt or convenient spade terminals
- Clear fuse cover

Specifications	ALL
Input Terminal Rating	32VDC @ 100A Max.
Input Wire Size	4-6 AWG
Output Terminal Rating	30A Max. per Circuit
Output Wire Size	12-16 AWG
Fuse	Automotive Blade up to 30A

	Dimensions	Cat.	Qty 1+	Qty 10+	Qty 25+
6 Way Screw	85(W) x 70(D) x 37(H)mm	SZ2095	$21.95	$19.45	$17.45
6 Way Spade	90(W) x 70(D) x 40(H)mm	SZ2096	$21.95	$19.45	$17.45
10 Way Screw	100(D) x 85(W) x 37(H)mm	SZ2097	$26.95	$23.95	$21.45
10 Way Spade	100(D) x 85(W) x 38(H)mm	SZ2098	$26.95	$23.95	$21.45

Fuse Blocks with Bus Bar

SZ2031

These versatile fuse blocks provides fused distribution of your positive terminals, as well as distribution for the negative wires. This is especially handy in a boat or caravan which may not have a chassis-ground type system. Each fuse output accepts up to 30A, up to 100A combined, with handy fuse-blown indication. Fuses not included, uses standard automotive fuses.

- Up to 30A per output
- Red LED blown fuse indication
- Negative bus bar

Specifications	ALL
Main Line	Terminal Rating: M5 Threaded Studs (32VDC, 100A max.) Wire Size: #4-6 AWG
Single Line	Terminal Rating: M4 Threaded Studs (32VDC, 30A Max.) Wire Size: #12-16 AWG
Terminals	Nickel Plated Copper
Screws	Stainless Steel

	Cat.	Qty 1+	Qty 5+	Qty 10+
6 Way	SZ2031	$29.95	$26.95	$23.95
12 Way	SZ2032	$39.95	$35.95	$31.95

Product Data:

We have so much data and fact sheets, we cannot fit it all in our catalogue. Check out our website for over 4,000 pages of data!

AUTOMOTIVE BLADE FUSES

Mini Blade Fuses

They look similar to the standard car blade fuses, except they are smaller. Used in new Holden Commodores, Falcons & more.

Quantity breaks for one type only

Current	Colour	Cat.	Qty 1+	Qty 10+	Qty 25+
2A	Grey	SF1909	$1.25	$1.00	$0.80
3A	Pink	SF1910	$1.25	$1.00	$0.80
5A	Orange	SF1912	$1.25	$1.00	$0.80
7.5A	Brown	SF1913	$1.25	$1.00	$0.80
10A	Red	SF1914	$1.25	$1.00	$0.80
15A	Blue	SF1915	$1.25	$1.00	$0.80
20A	Yellow	SF1916	$1.25	$1.00	$0.80
25A	Clear	SF1917	$1.25	$1.00	$0.80

Standard Blade Fuses

Quantity breaks for one type only

Current	Colour	Cat.	Qty 1+	Qty 10+	Qty 25+
1A	Black	SF2126	$1.10	$0.85	$0.70
2A	Grey	SF2127	$1.10	$0.85	$0.70
3A	Pink	SF2128	$1.10	$0.85	$0.70
5A	Orange	SF2130	$1.10	$0.85	$0.70
7.5A	Brown	SF2132	$1.10	$0.85	$0.70
10A	Red	SF2134	$1.10	$0.85	$0.70
15A	Blue	SF2136	$1.10	$0.85	$0.70
20A	Yellow	SF2138	$1.10	$0.85	$0.70
25A	Clear	SF2137	$1.10	$0.85	$0.70
30A	Green	SF2139	$1.10	$0.85	$0.70
35A	Purple	SF2143	$1.10	$0.85	$0.70
40A	Orange	SF2141	$1.10	$0.85	$0.70

AUTOMOTIVE FUSE PACKS

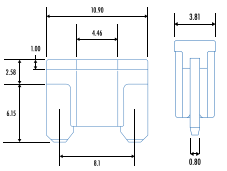
Automotive Fuse Pack

This kit contains around 120 standard size automotive fuses housed in a 6 compartment storage box. 20 x 5A, 10A, 15A, 20A, 25A & 30A fuses are included.

Cat.	Qty 1+	Qty 10+	Qty 25+
SF2142	$26.95	$23.95	$21.45

Micro Blade Fuses - 10 Pack

Micro-blade fuses to suit newer model cars. The pack contains one each of 5, 7.5, 25, 30A and two each of 10, 15, 20A.



Current	Multipack	Cat.	Qty 1+	Qty 10+	Qty 25+
5-30A	Pkt 10	SF2146	$11.95	$10.45	$9.45

Find Out More In Store
Our staff offer friendly and helpful service. We're here to help.

BLADE FUSES WITH FAILURE LAMP

Not your ordinary blade fuse, these have an integrated lamp which illuminates the moment the fuse blows. This makes finding that blown fuse a cinch, especially when the fuse is in a hard to get location, like under the car dashboard. They don't cost much either, so they are a very worthwhile investment.

Mini Blade Fuses with Lamp

Quantity breaks for one type only
- Ideal for circuits up to 32VDC
- 19(H) x 10.8(L) x 4(W)mm approx

Integrated lamp

Current	Colour	Cat.	Qty 1+	Qty 10+	Qty 25+
3A	Pink	SF5070	$1.65	$1.30	$1.05
5A	Orange	SF5072	$1.65	$1.30	$1.05
7.5A	Brown	SF5074	$1.65	$1.30	$1.05
10A	Red	SF5076	$1.65	$1.30	$1.05
15A	Blue	SF5078	$1.65	$1.30	$1.05
20A	Yellow	SF5080	$1.65	$1.30	$1.05
25A	Clear	SF5082	$1.65	$1.30	$1.05
30A	Green	SF5084	$1.65	$1.30	$1.05
5-30A	Pkt 6	SF5085	$6.95	$6.25	$5.50

Standard Blade Fuses with Lamp

- Dimensions:
  20.6(H) x 14.4(L) x 5(W)mm approx

Integrated lamp

Current	Colour	Cat.	Qty 1+	Qty 10+	Qty 25+
3A	Pink	SF5020	$1.45	$1.15	$0.90
5A	Orange	SF5022	$1.45	$1.15	$0.90
10A	Red	SF5026	$1.45	$1.15	$0.90
15A	Blue	SF5028	$1.45	$1.15	$0.90
20A	Yellow	SF5030	$1.45	$1.15	$0.90
30A	Green	SF5034	$1.45	$1.15	$0.90
5-30A	Pkt 6	SF5035	$5.95	$5.25	$4.75

WIRE TAPPED BLADE FUSES

Double Blade Fuse Socket Wire Tap

If you've ever wanted to install 12VDC devices near or around your dash but have been put off by the need to manually install new wiring and run it into your engine bay this is a great solution. Simply plug the fuse into a socket in your fusebox and you'll have an instant 12VDC power source. A great way to power headrest monitors, extra internal car lighting, gauges, and more. Outputs to a female bullet crimp connector.

Available in standard, mini and micro blade fuse models.

	Cat.	Qty 1+	Qty 10+	Qty 25+
Double Blade Fuse Socket	SF5115	$5.95	$4.75	$3.85
Double Mini Blade Fuse Socket	SF5125	$5.95	$4.75	$3.85
Double Micro Blade Fuse Socket **NEW**	SF5130	$5.95	$4.75	$3.85

FUSE PULLING TOOL

Blade & Mini Blade Pulling Tool

These handy fuse pullers make easy work of exchanging blown fuses. The device is suitable for both micro and mini blade fuses.
- Dimensions: 63(L) x 20(W) x 5(D)mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Fuse Puller	TH1973	$2.95	$2.65	$2.35

CIRCUIT BREAKERS - BLADE FUSE SIZE

A blade fuse that doesn't need replacing! This range of mini and standard size Blade circuit breakers is designed to directly replace standard or mini blade fuses. No need to fumble around in the dark looking for the blown fuse or to dig around in the toolbox for a suitable replacement. Choose between manual or automatic reset types. The manual type suit 12V-24V systems and trip once the current is exceeded, and allow you to fault find the circuit before resetting. The auto reset type suits 12V systems and will re-establish power to the circuit once the current returns to normal levels. Available in Mini or Standard size, and come in similar colour coding to standard blade fuses.

Mini Blade Circuit Breakers - Manual Reset

- Voltage: Circuits up to 28VDC
- Body dimensions: 25(L) x 12.5(W) x 7(D)mm (excludes 1mm reset button)
- Total length including blades: 35mm (excludes 1mm reset button)

Current	Colour	Type	Cat.	Qty 1+	Qty 10+	Qty 25+
5A	Tan	Manual	SF2352	$6.95	$6.25	$5.55
10A	Red	Manual	SF2354	$6.95	$6.25	$5.55
15A	Blue	Manual	SF2355	$6.95	$6.25	$5.55
20A	Yellow	Manual	SF2356	$6.95	$6.25	$5.55

Mini Blade Circuit Breakers - Auto Reset

- Voltage: Circuits up to 14VDC
- Body dimensions: 25(L) x 12.5(W) x 6(D)mm
- Total length including blades: 35mm

Current	Colour	Type	Cat.	Qty 1+	Qty 10+	Qty 25+
5A	Tan	Auto	SF2342	$6.95	$6.25	$5.55
10A	Red	Auto	SF2344	$6.95	$6.25	$5.55
15A	Blue	Auto	SF2345	$6.95	$6.25	$5.55
20A	Yellow	Auto	SF2346	$6.95	$6.25	$5.55

Standard Blade Circuit Breakers - Manual Reset

- Voltage: Circuits up to 28VDC
- Body dimensions: 24(L) x 20(W) x 6(D)mm (excludes 1mm reset button)
- Total length including blades: 31mm (excludes 1mm reset)

Current	Colour	Type	Cat.	Qty 1+	Qty 10+	Qty 25+
5A	Lt. Brown	Manual	SF2330	$6.95	$6.25	$5.55
7.5A	Brown	Manual	SF2331	$6.95	$6.25	$5.55
10A	Red	Manual	SF2333	$6.95	$6.25	$5.55
15A	Blue	Manual	SF2334	$6.95	$6.25	$5.55
20A	Yellow	Manual	SF2335	$6.95	$6.25	$5.55
25A	White	Manual	SF2336	$6.95	$6.25	$5.55
30A	Green	Manual	SF2337	$6.95	$6.25	$5.55

Standard Blade Circuit Breakers - Auto Reset

- Voltage: Circuits up to 14VDC
- Body dimensions: 24(L) x 20(W) x 6(D)mm
- Total length including blades: 31mm

Current	Colour	Type	Cat.	Qty 1+	Qty 10+	Qty 25+
5A	Lt. Brown	Auto	SF2320	$6.95	$6.25	$5.55
7.5A	Brown	Auto	SF2321	$6.95	$6.25	$5.55
10A	Red	Auto	SF2323	$6.95	$6.25	$5.55
15A	Blue	Auto	SF2324	$6.95	$6.25	$5.55
20A	Yellow	Auto	SF2325	$6.95	$6.25	$5.55
25A	White	Auto	SF2326	$6.95	$6.25	$5.55
30A	Green	Auto	SF2327	$6.95	$6.25	$5.55

CIRCUIT BREAKERS

Chassis Mount Auto Circuit Breakers

Single pole thermal circuit breaker. Auto reset.

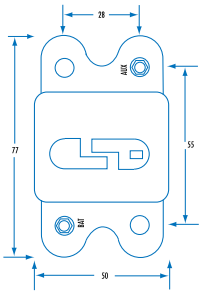
- 12 and 24VDC in current ratings from 20 - 50A

SF4100

Current	Voltage	Cat.	Qty 1+	Qty 10+	Qty 25+
20A	12VDC	SF4100	$9.95	$8.95	$7.95
30A	12VDC	SF4102	$9.95	$8.95	$7.95
40A	12VDC	SF4104	$9.95	$8.95	$7.95
50A	12VDC	SF4106	$9.95	$8.95	$7.95
20A	24VDC	SF4108	$9.95	$8.95	$7.95

High Current DC Circuit Breakers

Moulded in black electrical grade bakelite, these rugged and reliable devices allow you to simply reset rather than find another expensive fuse. They can be used as an occasional circuit isolation switch. Two popular current ratings. Both units have the same physical dimensions. Ideal for car sound installations. Operating voltage is 12 to 14VDC. Each device will trip within a few milliseconds under short circuit conditions and feature protective rubber caps, test button and gold plated 5mm dia. terminals.



70A 12-14VDC

Will trip within 1 minute at 90A load. Will trip within a few milliseconds under short circuit conditions. Supplied with 5mm dia gold plated terminals with captive shakeproof washer and provision for up to 1/4" mounting bolts. Protective rubber caps for terminals. Test button on top of unit enables circuit breaker to be used as switch circuit restored with simple lever action.

SF2265

100A 12-14VDC

Will trip at 110A or immediately under short circuit conditions.

Rating (A)	Cat.	Qty 1+	Qty 10+	Qty 25+
70	SF2265	$34.95	$30.95	$27.95
100	SF2266	$34.95	$30.95	$27.95

Heavy Duty Panel Mount Circuit Breakers

A range of heavy duty and high quality panel mount circuit breakers. The reset switch on these units are high grade and will not fail in short period unlike other units in the market. It has a protective plastic cover to prevent accidental shortage. Incorporates multi-wire gauge inputs and outputs, they are perfect for high end car audio installations, automotive wiring or solar installations. Terminals are platinum plated.

- Measures at 85(W) x 68(H) x 35(D)mm

Current	Cat.	Qty 1+	Qty 4+	Qty 10+
60A	SZ2081	$44.95	$39.95	$35.95
120A	SZ2083	$44.95	$39.95	$35.95
200A	SZ2085	$44.95	$39.95	$35.95

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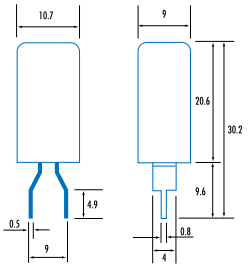
CIRCUIT BREAKERS CONTINUED

PCB Mount Thermal Circuit Breakers (SPST)

Miniature auto-resetting thermal type units that solder directly into a PCB.

- Ideal for protecting power supplies, amplifier output transistors, appliances etc
- Slow response time is ideal when capricious tripping would be a nuisance
- Judicious selection of breaker rating will ensure protection without unnecessary tripping



SF2281

SF2284

Specifications	All Models
Calibration	100% rated; will not trip. (all at 25°C) 101-170% increasing likelihood of trip / 175-199% trip within 1 hour. 200% within 1 minute / 200% + from 1 minute to seconds.
Input	12VDC, 125VAC
Dielectric Strength	1500VAC 1 Minute
Contact Endurance	>1000 cycles, @ 150% of contact rating.

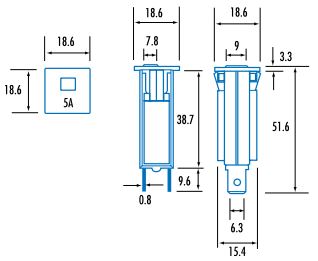
Current	Resistance (Ω)	Cat.	Qty 1+	Qty 10+	Qty 25+
1.5A	0.12	SF2281	$7.95	$7.15	$6.35
3A	0.075	SF2283	$7.95	$7.15	$6.35
4A	0.050	SF2284	$7.95	$7.15	$6.35
5A	0.050	SF2285	$7.95	$7.15	$6.35

Panel Mount Thermal Circuit Breakers (CBE)

IEC 934 TYPE "R/TO"

These attractive looking units feature a black 19mm square facade with a centrally mounted bright red 'trip' button.

- When tripped, the red button extends
- To reset simply push button back in (once fault has been cleared)
- Slow response time ideal for inductive/ reactive loads



Specifications	All Models
Hold Current	100% load indefinitely
Trip Current	Within 1 hour @ 135% load, Within 1 min. @ 200% load
Input	32VDC, 125VAC & 250VAC
Dielectric Strength	1500VAC 1 Minute
Contact Endurance	>500 cycles @ 150% of contact rating.

Current	Resistance (Ω)	Cat.	Qty 1+	Qty 10+	Qty 25+
3A	0.16	SF2293	$9.95	$8.95	$7.95
5A	0.12	SF2295	$9.95	$8.95	$7.95
7A	0.075	SF2297	$9.95	$8.95	$7.95
10A	0.015	SF2300	$9.95	$8.95	$7.95
15A	0.008	SF2315	$9.95	$8.95	$7.95

Tell a Friend

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CATALOGUE DEPARTMENT - JAYCAR:

catalogue@jaycar.com

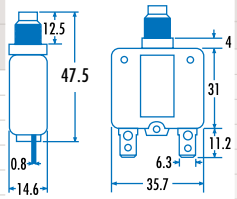
Electrical Type Circuit Breaker

These circuit breakers are rated at 250VAC.

- Maximum voltage 250VAC or 50VDC
- Will hold 100% of rated current indefinitely at 25°C
- Derate at higher temperatures
- Manual push reset
- Insulation resistance >100M ohm
- Mounting hole diameter 12mm
- Size 46(H including terminals) x 35.7(D) x 14.6(W)mm
- Approval CS8389N

SF2261

Typical Derating Factors		
Temp°C	10-25A	3-5A
60	0.50	-
50	0.60	-
40	0.72	0.45
30	0.85	0.70
25	1.00	1.00
20	1.10	1.20
10	1.25	1.45



% Of Rating	Time To trip
100	Indefinite
150	< 1 hour
200	4.0 - 30.0 sec
300	2.5 -11.0 sec
400	1.6 - 7.0 sec
500	0.8 - 2.5 sec
600	0.6 - 1.7 sec

Current	Resistance (mΩ)	Cat.	Qty 1+	Qty 10+	Qty 25+
3A	100	SF2252	$9.95	$8.95	$7.95
5A	50	SF2254	$9.95	$8.95	$7.95
10A	20	SF2258	$9.95	$8.95	$7.95
15A	15	SF2259	$9.95	$8.95	$7.95
20A	10	SF2260	$9.95	$8.95	$7.95
25A	6	SF2261	$9.95	$8.95	$7.95

Marine Grade Illuminated Switch Panels with Circuit Breakers

An economical solution to controlling multiple DC circuits on your boat, or any other application where you want to switch multiple DC circuits. Each switch panel is an attractive moulded ABS plate, with high quality 10A rated illuminated rocker switches and re-settable circuit breakers on each circuit. Power is supplied on a common rail to keep wiring neater, and wiring connections are made with standard spade terminals.

Two versions available:

4 WAY CAT. SZ1902

- Dimensions 110(H) x 100(W) x 45(D)mm

6 WAY CAT. SZ1903

- Dimensions 160(H) x 100(W) x 45(D)mm

SZ1903

SZ1902

Size	Cat.	Qty 1+	Qty 10+	Qty 25+
4 Way	SZ1902	$39.95	$35.95	$31.95
6 Way	SZ1903	$49.95	$44.95	$39.95

IP66 Marine Switch Panels with Circuit Breakers

These units feature the attractive tactile rocker switches that are common on luxury Australian and foreign made motor cruisers. The panels have Butyl rubber gaskets and IP66 water resistant rated switches and circuit breakers, making these switch panels suitable for an exposed environment. They are pre-wired as much as possible, with wiring connections made via standard spade terminals for ease. Both require about 80mm of space behind the mounting bulkhead. The 4 way has 6,10,15 & 20A rated circuit breakers and the 6 way has 6,6,10,10,15 & 20A breakers, and the switches feature LED illumination to let you know which circuit is active.

- Moulded from ABS plastic

Two versions available:

4 Way: 120(H) x 130(W)mm

6 Way: 170(H) x 130(W)mm

SZ1906 SZ1907

Type	Cat.	Qty 1+	Qty 10+	Qty 25+
4 Way	SZ1906	$69.95	$62.95	$55.95
6 Way	SZ1907	$99.95	$89.95	$79.95

CIRCUIT BREAKERS CONTINUED

Anti-Tamper 4-Gang Switch Bank/Circuit Breaker

This switch bank consists of a gang of 4 x 16A/12VDC circuit breaker rocker switches pre-wired with protective translucent panels to discourage naughty fingers tampering with them. The rockers act like switches but will behave like a circuit breaker if any circuit pulls more than 16A. They would typically be used to power all sorts of things while under way which should not be turned off.
Each translucent panel has a recess to accept a permanent sticker annunciating the function of the switch. A sheet of decal annunciators is supplied with 45 (yes 45) labels. These range from "Bilge Pump" to "Deck Wash", to "Fridge", "Macerator Pump", "Radar", "VHF", etc. Front dimensions of the panel are 130(W) x 50(H)mm. Approx. 40mm is needed behind the panel for wiring access. 2 x No. 8 countersunk screws are supplied.

Cat.	Qty 1+	Qty 10+	Qty 25+
SZ1926	$29.95	$26.95	$23.95

POLYSWITCHES

PTC Fuses - Circuit Protection

Polyswitch protectors are based on conductive polymers and act like resettable solid state circuit breakers. When the operating current of the protector is exceeded the interior of the device partially melts, which increases the volume increasing the resistance drastically. This in turn reduces the current. The device stays in this state while the current is maintained because its temperature is elevated. Once the current is removed, the device re-establishes itself almost immediately, so that the low resistance value is restored.

- Voltage ratings RN3460/62 - 60V; the rest are 50V

Cat.	Industry Part No	Trip Watts 4Ω	6Ω	8Ω	Trip Current Amps
RN3460	RXE075	5.1	7.7	10.2	1.50
RN3462	RXE090	7.3	10.9	14.6	1.8
RN3464	RXE110	10.9	16.3	21.8	2.2
RN3466	RXE160	23.0	34.6	46.1	3.2
RN3468	RXE185	31.4	47.0	62.7	3.7
RN3470	RXE250	56.3	84.4	112.5	5.0

Industry No.	Cat.	Qty 1+	Qty 10+	Qty 25+
RXE075	RN3460	$1.95	$1.75	$1.55
RXE090	RN3462	$2.10	$1.85	$1.65
RXE110	RN3464	$2.30	$2.05	$1.80
RXE160	RN3466	$2.50	$2.25	$2.00
RXE185	RN3468	$2.70	$2.40	$2.15
RXE250	RN3470	$2.95	$2.65	$2.35

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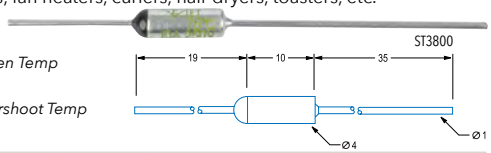
THERMAL PROTECTION

Thermal Fuses

These devices go open circuit permanently when they reach their rated temperature. They are used extensively in 240V mains rated appliances including, heaters, fan heaters, curlers, hair dryers, toasters, etc.

- UL, CSA Approved

Tf - Functioning Open Temp
Th - Holding Temp
Tm - Maximum Overshoot Temp



Cat.	Tf°C	Th°C	Tm°C	Nonimal Temp
ST3800	75	50	105	70°C +3/-1
ST3804	136	101	166	132°C +2/-2
ST3808	158	123	263	154°C +0/-5
ST3810	185	150	263	192°C +1/-3
ST3812	219	174	249	214°C +2/-2
ST3814	233	188	263	229°C +1/-3

Marking	Temperature °C	Cat.	Qty 1+	Qty 10+	Qty 25+
Yellow	70	ST3800	$3.95	$3.55	$3.15
Grey	132	ST3804	$3.95	$3.55	$3.15
Black	154	ST3808	$3.95	$3.55	$3.15
Light Green	192	ST3810	$3.95	$3.55	$3.15
Dark Green	214	ST3812	$3.95	$3.55	$3.15
Dark Blue	229	ST3814	$3.95	$3.55	$3.15

THERMOSTAT SWITCHES

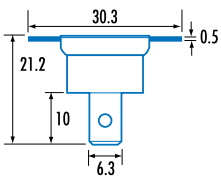
Thermal Circuit Breaker/Switch

AUTOMATIC RESETTING BI-METALLIC DISC, SNAP ACTING

This phenolic-housed unit attaches to any metal surface which needs to be heat monitored.

- Normally closed or normally open available

Specifications	All Models
Operating Tolerance	+/- 5°C (32VDC), +/- 8°C(125VAC), +/- 10°C (250VAC)
Reset Differential	10°C - 50°C
Contact Endurance	32VDC - 100mA - 50,000 cycles
Cycles	125VAC - 10A - 100,000 cycles
Cycles	250VAC - 6A - 30,000 cycles
Interrupt Capacity	125VAC x 60A - 5 cycles
Overshoot Temperature	200°C/5 minutes
Dielectric Strength	1500VAC 1 minute
Reset Type	Auto Reset



Opening Temp (°C)	Reclosing Temp (Approx °C)		Cat.	Qty 1+	Qty 10+	Qty 25+
60	40	Normally Closed	ST3821	$6.50	$5.85	$5.20
70	58	Normally Closed	ST3823	$6.50	$5.85	$5.20
90	75	Normally Closed	ST3825	$6.50	$5.85	$5.20
100	85	Normally Closed	ST3826	$6.50	$5.85	$5.20

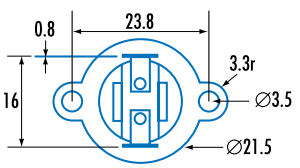
NORMALLY CLOSED

When the surface meets or exceeds a certain temperature the SPST bi-metallic element goes open circuit.

- The unit resets automatically when temperature falls below a specified limit
- Ideal for any electrical item that needs thermal protection

NORMALLY OPEN

These thermostat switches have normally open contacts. They operate once the temperature reaches a specified limit and automatically reset to their original normally open state once the temperate drops below its rated temperature. These are suitable for power amplifier applications and other temperature sensitive devices where a cooling fan needs to be integrated to cool the device down. Mounting holes are provided, ideal for attachment to a heatsink or any metallic surface.



Thermostat (°C)		Cat.	Qty 1+	Qty 10+	Qty 25+
50	Normally Open	ST3831	$6.50	$5.85	$5.20
70	Normally Open	ST3833	$6.50	$5.85	$5.20
100	Normally Open	ST3836	$6.50	$5.85	$5.20

INDIVIDUAL "CONTURA" STYLE DC ROCKER SWITCHES

These are the superb looking rocker switches that you have seen in the cockpits of the 70-100ft luxury motor cruisers recently. They would look great in your 4WD, RV, Caravan or any other application as well. The base switch supplied (rated at 12V 20A, 24V 10A) comes with a double-LED illumination (low in OFF, high in the ON position), a standard rocker cover and a standard range of decals to customise the switch to your application.

Typical decals are symbols for: windscreen wipers, horn, heater, etc; there are dozens of these decals included. Also available are a set of special laser-etched covers with the following graphic symbols to really create a professional finish. You need to buy the basic switch (in blue, white or red illumination) and then the custom cover (if required).

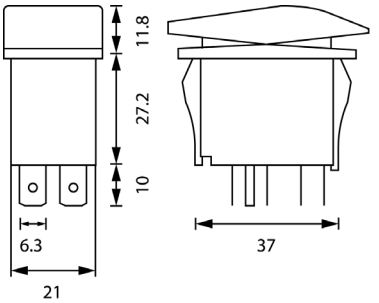
SK0910

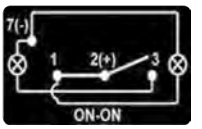
SK0912

SK0914

SK0916

Supplied with cover removal tool





Rating		Colour	Cat.	Qty 1+	Qty 10+	Qty 25+
12V 20A/24V 10A	SPDT	White	SK0910	$15.95	$13.95	$12.45
12V 20A/24V 10A	SPDT	Red	SK0912	$15.95	$13.95	$12.45
12V 20A/24V 10A	SPDT	Blue	SK0914	$15.95	$13.95	$12.45
12V 20A/24V 10A	SPDT	Amber	SK0916	$15.95	$13.95	$12.45

SK0920 SK0921 SK0922 SK0923 SK0924

SK0925 SK0926 SK0927 SK0928 SK0929

Laser-etched Rockers	Cat.	Qty 1+	Qty 10+	Qty 25+
12V Power	SK0920	$3.45	$3.10	$2.75
Fridge	SK0921	$3.45	$3.10	$2.75
Aux Battery	SK0922	$3.45	$3.10	$2.75
Interior Lights	SK0923	$3.45	$3.10	$2.75
Spot Lights	SK0924	$3.45	$3.10	$2.75
Horn	SK0925	$3.45	$3.10	$2.75
Rear View Camera	SK0926	$3.45	$3.10	$2.75
Inverter	SK0927	$3.45	$3.10	$2.75
Driving Lights	SK0928	$3.45	$3.10	$2.75
Thermofan	SK0929	$3.45	$3.10	$2.75

Modular Rocker Switch Brackets

Compatible with our Contura style switches, these brackets use a clever modular design allowing you to "stack" multiple rocker switches together into a single cutout. The end-cap piece works for either end, and you can put as many centre pieces in as you like. Also available in a single-switch mount. 100% interchangeable with the round-hole variant of these brackets - PS2806/PS2808 (See page B90).

SK0800

SK0802

SK0804

	Cat.	Qty 1+	Qty 10+	Qty 50+
Single Mount	SK0800	$3.95	$3.55	$3.15
Modular End	SK0802	$3.95	$3.55	$3.15
Modular Centre	SK0804	$3.95	$3.55	$3.15

Illuminated Blue Rocker Switch Panels

Straight forward installation and wiring, with just four connections - everything else is pre-wired! Then all you need to do is connect your various peripheral devices. Switches are rated at 20A for a 12V system (10A for 24V) up to a maximum 45A per panel. The LED illumination is powered separately, so you can run it through a switch or dimmer too.

- Easy installation
- High quality switches
- Blue LED illumination

SZ1923

SZ1925

Specifications	ALL
Switch Rating	12VDC @ 20A 24VDC @ 10A
Panel Rating	45A Total

	Cat.	Qty 1+	Qty 5+	Qty 10+
2 Way	SZ1923	$39.95	$35.95	$31.95
4 Way	SZ1924	$59.95	$53.95	$47.95
6 Way	SZ1925	$79.95	$71.95	$63.95

p.A158 - "Contura" Style USB Sockets

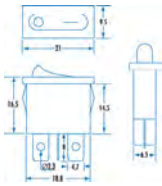
click & collect

Click and Collect is now available at all Jaycar stores! Simply place your order online and the team at your local store will get the order together for you, ready to collect in just 1 hour!

ROCKER SWITCHES

SPST - Ultra Mini

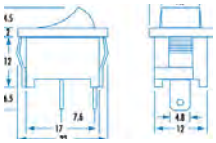
- Snap in fitting
- SPST 250VAC 6A
- Cutout size 6.5(W) x 19(H)mm
- Black body, black actuator
- QC tab termination 6.4mm (PT4607)



Rating		Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 6A	SPST	SK0975	$2.45	$2.20	$1.95

SPST - Mini

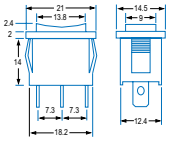
- Dimensions: 21 x 15mm
- Panel cut out size 13 x 19.5mm
- QC tab termination
- SPST 240V 6A
- Black actuator



Rating		Cat.	Qty 1+	Qty 10+	Qty 25+
240VAC 6A	SPST	SK0984	$1.95	$1.75	$1.55

SPDT - Centre Off

- Latching
- Voltage: 250VAC
- Current: 6 Amp



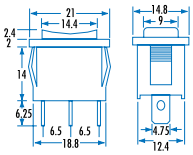
Rating		Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 6A	SPDT	SK0991	$4.95	$4.45	$3.90

SPDT - Mini - Centre Off

SPRING RETURN BOTH SIDES

Momentary contacts with spring return to centre on both sides.

- Mini QC tab termination 4.8mm (PT4607)
- Contact arrangement SPDT mom-off-mom



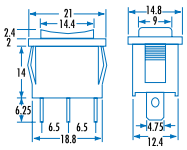
Rating		Cat.	Qty 1+	Qty 10+	Qty 25+
250V 6A	SPDT	SK0987	$4.95	$4.45	$3.90

SPST IP56 Rated Mini Rocker Switch

SPST mini rocker switches with spade QC lugs. Sealed with a rubber boot and IP56 rated.

Two types available:

- Black: SK0968
- Red (illuminated): SK0969
- Cutout: 18.8 x 12.5mm

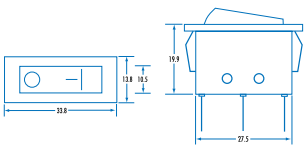


Rating	Colour	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 10A	Black	SK0968	$8.75	$7.85	$7.00
12VDC 16A	Red - Illuminated	SK0969	$9.75	$8.75	$7.80

SPST - Illuminated

Black body with illuminated actuator. Ideal replacements for appliances

- Snap in fitting
- QC tab termination 6.8mm (PT4507)
- Cutout: 33.8 x 13.8mm

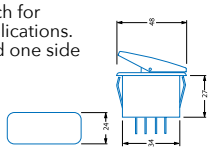


Rating	Colour	Cat.	Qty 1+	Qty 10+	Qty 25+
240VAC 15A	Blue	SK0976	$3.50	$3.15	$2.75
240VAC 15A	Red	SK0978	$3.50	$3.15	$2.75
240VAC 15A	Green	SK0979	$3.50	$3.15	$2.75

SPDT IP65 Illuminated Centre Off Rocker Switch

IP65 rated, illuminated switch for automotive and marine applications. Illuminates one side red and one side green

- On-Off-On
- Rating: 14VDC, 21A
- Cutout size: 34 x 21mm

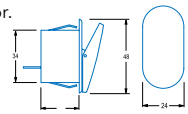


Rating		Cat.	Qty 1+	Qty 10+	Qty 25+
14VDC 21A	SPDT	SK0999	$16.95	$14.95	$13.45

SPST Illuminated IP56 Rated Rocker Switch

IP56 rated, large rocker actuator.

- SPST
- Illuminated red
- Rated for 12VDC 20A
- Mounting hole 20.5 x 37mm

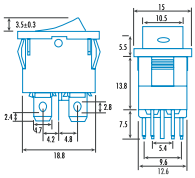


Rating		Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC 20A Red Illuminated		SK0997	$14.95	$13.45	$11.95

DPST - Mini - Neon Illuminated

- 240VAC
- Illuminated actuator
- Solder terminals
- QC tab termination: 6.4mm (PT4607)

As used in our Powerboards

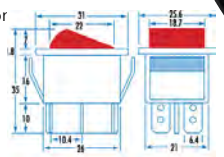


Rating		Colour	Cat.	Qty 1+	Qty 10+	Qty 25+
240VAC 10A	DPST	Red	SK0995	$4.95	$4.45	$3.90

DPDT - Large - Neon Illuminated

Mains Illuminated. DPDT 240VAC 15 amp.

- Black body, available in red or green illumination
- Spade lug connection
- Cutout 27 x 22mm
- QC tab termination: 6.8mm (PT4507)

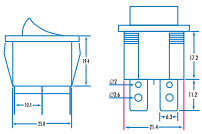


Rating		Colour	Cat.	Qty 1+	Qty 10+	Qty 25+
240VAC 15A	DPDT	Red	SK0982	$5.95	$5.35	$4.75
240VAC 15A	DPDT	Green	SK0983	$5.95	$5.35	$4.75

DPDT - Large - Non Illuminated

DPDT switch with black body and black actuator.

- QC tab termination
- 240VAC 16A
- Snap in fitting



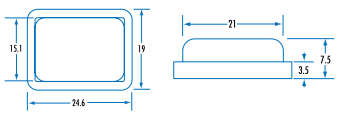
Rating	Cat.	Qty 1+	Qty 10+	Qty 25+
240VAC 16A	SK0981	$4.95	$4.45	$3.95

Waterproof Caps for Rocker Switches

Push-on, clear plastic caps to suit rocker switches.

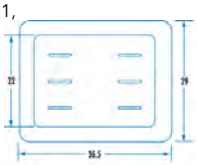
SUITS MINI SWITCHES

Suits switches SK0984 and SK0987.



SUITS LARGE ROCKER SWITCHES

Suits switches SK0980, SK0981, SK0982 and SK0983.



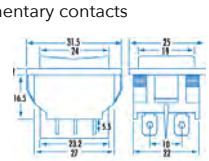
Rating	Cat.	Qty 1+	Qty 10+	Qty 25+
Suits Mini Rocker Switches	SK0970	$1.40	$1.25	$1.10
Suits Larger Rocker Switches	SK0972	$1.95	$1.75	$1.55

ROCKER SWITCHES CONTINUED

DPDT - Large - Centre/Off

Spring Return Both Sides, Momentary contacts with spring returns to centre on both sides. These are commonly used for car power antennas and power windows.

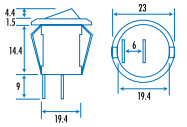
- Rated at 10A 250VAC
- QC tab termination 6.4mm (PT4607)



Rating	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 10A	SK0980	$7.95	$6.95	$6.25

SPST - Round Actuator

- Snap fits into a 20mm round hole
- 10 amps @ 250VAC
- Black body with black actuator
- QC tab termination 6.4mm (PT4607)

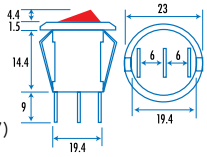


Rating	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 10A	SK0960	$2.95	$2.65	$2.35

SPST - Round Actuator

Illuminated Red

- Snap fits into a 20mm round hole
- 6A @ 250VAC
- Black body with red neon actuator
- QC tab termination 6.4mm (PT4607)

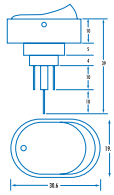


Rating	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 6A	SK0962	$2.95	$2.60	$2.30

SPST - Rocker Actuator

LED Illuminated - Red. This is a classy switch. It is a rocker, but only needs a round 12mm hole (with 1mm flat). It is SPST and can handle a massive 30 amps at 12VDC. There is an LED in the actuator which lights from a 9 - 12V source.

- QC tab termination 6.8mm (PT4507)

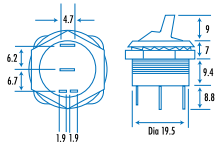


Rating	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC 30A	SK0955	$4.95	$4.45	$3.90

SPST - Paddle

Illuminated paddle type actuator with built in red LED.

- Mounts easy in a 20mm hole
- 6A @ 250VAC
- LED requires 12V @ 20mA
- Black body
- QC tab termination 6.8mm (PT4507)
- Solder tabs for LED

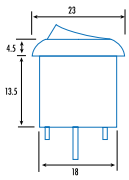


Rating	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 6A	SK0964	$5.95	$5.35	$4.75

DPDT Round Actuator - Red

This rocker mounts in a round 18mm hole.

- DPDT
- 6 amps @ 250VAC
- Black body, red actuator
- Solder pins
- 18mm mounting hole

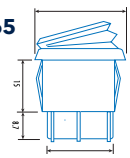


Rating	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 6A	SK0994	$4.95	$4.45	$3.90

DPDT - Round Actuator - IP65

DPDT round rocker switches with mini spade QC lugs. Sealed with a rubber boot and IP65 rated.

- 20mm mounting hole



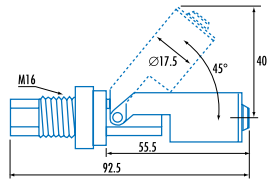
Rating	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 6A Black	SK0966	$8.95	$8.05	$7.15
250VAC 6A Red - Illuminated	SK0967	$9.95	$8.95	$7.95

FLOAT SWITCHES

Float Switch

VERTICAL OR HORIZONTAL MOUNT NO or NC. Ideal for use in conjunction with solenoid valves, water pumps, etc., this float switch can be made NO or NC (Normally Open or Normally Closed) by the orientation of the float. Horizontally mounted so the float falls, when the fluid level rises it will switch ON at maximum float height. Mounting the switch so the float rises upwards when the fluid level rises above switch height it will switch OFF. Vertical mounting, with the float down, will switch OFF at a high fluid level. Widely used in marine, automobile, industrial, agricultural fluid level sensing applications.

- 560mm wire leads
- 92.5(L)x 18(D)mm x M16
- Float Rise height: 40mm from centreline



	Cat.	Qty 1+	Qty 10+	Qty 25+
NO or NC	SF0920	$19.95	$17.95	$15.95

Top Mounting Float Switch (Level Detector)

Ideal to control tank filling systems this vertical movement float switch fits quickly to the lid or top cover of a tank or other container. A mere 20mm travel distance for the float will trigger the switch ensuring you leave an air gap and don't overfill the vessel. Contacts are closed when the float is out of liquid and open when the float is elevated.

- Dimensions: 70(L)x23(Dia)mm
- Contact Rating: 200V 500mA
- Mounting Diameter: 8mm

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 10+	Qty 25+
	SF0922	$17.95	$15.95	$14.35

LAMP STYLE PUSHBUTTON SWITCH

240V 2A Bed Lamp Style Pushbutton

Universal pushbutton switch suitable for replacing switches in some equipment. Also commonly used in small electronics projects such as school science experiments due to ease of connection using screw terminals.

- 240V 2A rating
- Panel mounting hole: 10mm
- Maximum panel thickness: 2.5mm
- Pushbutton stem: 7(L) x 5(Dia.)mm
- Dimensions: 25(H) x 24(L) x 12(W)mm

Sorry! We cannot find a double pole version of this switch.

Type	Type	Cat.	Qty 1+	Qty 10+	Qty 25+
Pushbutton	SPST	SP0735	$2.45	$2.20	$1.95

INLINE DC SWITCH

Inline Low Voltage Switch

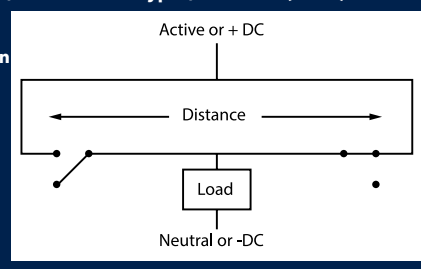
Simply connect your plug pack adaptor into this handy in-line switch to provide quick and easy on/off control. Much easier than unplugging the connector or reaching for the power point when you want to switch your device on or off. Fitted with 2.1mm DC plug & socket and rated at 24VDC at 2A.

Rating	Cat.	Qty 1+	Qty 10+	Qty 25+
24VDC 2A	SK0998	$7.95	$6.95	$6.25

DUAL SWITCHING

This circuit enables you to turn a load on or off (typically lighting) from either switch which may be a long way apart. The switches must be single pole, double throw types, minimum (SPDT).

Note! Only a qualified electrician can perform this wiring for 240V. You can do it yourself for low AC or DC voltage wiring.

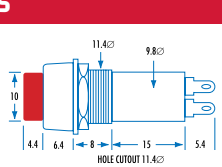


PUSHBUTTON SWITCHES

SPST Square

Rated 3A 250VAC.

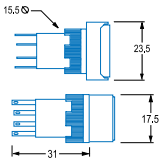
- Mounting hole 12mm



Rating	Cat.	Qty 1+	Qty 10+	Qty 25+
Push-on Momentary SPST Red	SP0716	$2.45	$2.20	$1.95
Push-on/Push off SPST Black Latching	SP0718	$2.45	$2.20	$1.95
Push-Off (N/C) SPST Momentary - Red	SP0717	$2.45	$2.20	$1.95

DPDT Illuminated - IP65

- Available in momentary or on/off action
- Rated for 250VAC 3A
- 12VDC LED illumination
- Mounting hole 15mm
- IP65 rated
- Contact arrangement DPDT N.O./N.C.

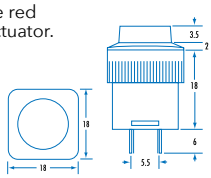


Rating	Action	Colour	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 3A	Momentary	Red	SP0741	$14.95	$13.45	$11.95
250VAC 3A	Push On Push Off	Red	SP0745	$15.95	$13.95	$12.45
250VAC 3A	Momentary	Green	SP0747	$14.95	$13.45	$11.95
250VAC 3A	Push On Push Off	Green	SP0749	$15.95	$13.95	$12.45

SPST LED Illuminated

These short bodied pushbuttons are available in 2 styles. Both have red LEDs behind a red diffused actuator.

- Rated at 1.5A 250VAC
- LED needs 2VDC @ 20mA

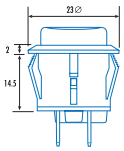


Rating	Action	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 1.5A	Momentary	SP0706	$6.95	$6.25	$5.55
250VAC 1.5A	Push On Push Off	SP0704	$6.95	$6.25	$5.55

DPST Round - IP56

IP56 rated round pushbutton switches.

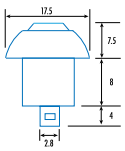
- QC spade lugs
- Push on/push off
- Mounting hole: 20mm dia



Rating	Colour	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 6A DPST	Black	SP0743	$6.95	$6.25	$5.55
250VAC 6A DPST	Red Illuminated	SP0751	$6.95	$6.25	$5.50

SPST Dome - IP67

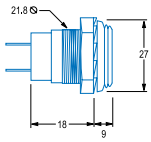
- IP67 rated
- Momentary action
- Mounting hole 12mm
- Contact arrangement SPST N.O.



Rating	Colour	Cat.	Qty 1+	Qty 10+	Qty 25+
50V 100mA SPST	Black	SP0656	$4.95	$4.45	$3.90
50V 100mA SPST	Red	SP0657	$4.95	$4.45	$3.90

SPST Round - IP65

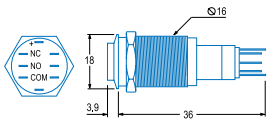
- Available in momentary or on/off action
- Rated for 14V 10A
- Mounting hole 22mm
- Contact arrangement SPST N.O.
- IP65 rated



Rating	Colour	Action	Cat.	Qty 1+	Qty 10+	Qty 25+
14V 10A	Black	Momentary	SP0756	$7.95	$7.15	$6.35
14V 10A	Red	Momentary Illuminated	SP0757	$9.95	$8.95	$7.95
14V 10A	Black	Push On Push Off	SP0758	$7.95	$7.15	$6.35
14V 10A	Red	Push On Push Off Illum	SP0759	$9.95	$8.95	$7.95

DPDT Illuminated - IP67

- DPDT (N.O./N.C.), on-off or momentary
- Rated for 250VAC@3A
- 12VDC LED illumination
- IP67 rated
- Mounting hole 16mm



Rating	Colour	Action	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 3A	Red	on - off	SP0791	$24.95	$22.45	$19.95
250VAC 3A	Green	on - off	SP0792	$24.95	$22.45	$19.95
250VAC 3A	Blue	on - off	SP0793	$24.95	$22.45	$19.95
250VAC 3A	Red	Momentary	SP0796	$22.95	$20.45	$17.95
250VAC 3A	Green	Momentary	SP0797	$22.95	$20.45	$17.95
250VAC 3A	Blue	Momentary	SP0798	$22.95	$20.45	$17.95

DPDT Dual Colour Illuminated - IP67

Similar to the illuminated switches shown above, but illuminate red or green depending on the on-off state.

- DPDT (N.O./N.C.), on-off or momentary
- Rated for 250VAC@3A
- 12VDC LED illumination
- IP67 rated
- Mounting hole 16mm

Action	Colour	Cat.	Qty 1+	Qty 10+	Qty 25+
Momentary	(Red to Green)	SP0787	$23.95	$21.45	$18.95
On-off	(Red to Green)	SP0788	$25.95	$22.95	$20.45

19mm IP67 Metal Pushbutton Momentary Switch with Illumated Ring

A durable and stylish stainless steel switch with LED illumination.

- Dust and waterproof to IP67
- 12V LED illumination
- 19mm mounting hole

SP0800/SP0802/SP0804:

- DPDT momentary action

SP0810:

- SPDT momentary action with blue Power symbol

SP0810 (SPDT)

	Action	Cat.	Qty 1+	Qty 10+	Qty 25+
Red	DPDT	SP0800	$19.95	$17.95	$15.95
Blue	SPDT	SP0810	$20.95	$18.45	$16.45
Blue	DPDT	SP0802	$19.95	$17.95	$15.95
Green	DPDT	SP0804	$19.95	$17.95	$15.95

SPDT Illuminated Arcade Button

Brightly coloured illuminated pushbutton switches ideal for creating a custom arcade machine, or even use as a large illuminated pushbutton for a control panel. Suits 25mm mounting hole.

- SPDT Microswitch for reliable operation
- All connections are 6.3mm spade
- Includes LED illumination suitable for 12V

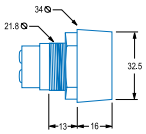
Rating	Colour	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 5A SPDT	Red	SP0662	$9.95	$8.95	$7.95
250VAC 5A SPDT	Yellow	SP0664	$9.95	$8.95	$7.95
250VAC 5A SPDT	Green	SP0665	$9.95	$8.95	$7.95
250VAC 5A SPDT	Blue	SP0666	$9.95	$8.95	$7.95
250VAC 5A SPDT	White	SP0669	$9.95	$8.95	$7.95

PUSHBUTTON SWITCHES

IGNITION SWITCHES

SPST Engine Start Switch

- Keyless engine start for track or street use
- Illuminated momentary action pushbutton
- Rated for 12VDC 50A
- Mounting hole 22mm
- Contact arrangement SPST N.O.

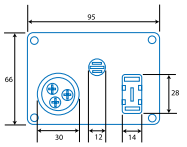


Rating		Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC 50A	SPST	SP0773	$19.95	$17.95	$15.95

Racing Ignition Switch Panel - SPST

Complete ignition switch panel ready to install in your car. Push button engine start, missile launch ignition on and indicator light. Finished in faux carbon fibre to complete the look.

- Max depth 38mm
- Contact arrangement SPST N.O. (Both switches)
- 95(W) x 66(H)mm



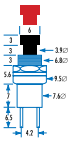
Rating	Type	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC 20A	SPST	SP0774	$39.95	$35.95	$31.95

MOMENTARY SWITCHES

SPST - Miniature

125VAC 1 amp rating.

- Momentary action
- Push-on

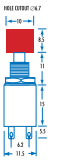


Rating	Colour	Type	Cat.	Qty 1+	Qty 10+	Qty 25+
125VAC 1A	Red	Mom	SP0710	$1.95	$1.75	$1.55
125VAC 1A	Black	Mom	SP0711	$1.95	$1.75	$1.55

SPST

SPST momentary push on switch

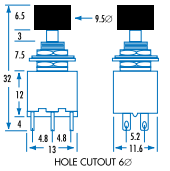
- Rated @ 1.5A 250VAC
- Actuator diameter 10mm
- Cutout 7mm
- Will panel mount on 1/2" centres



Rating	Type	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 1.5A	SPST	SP0702	$3.95	$3.45	$3.15

DPDT

- Gold Contacts
- Rated 125VAC, 3A
- 6mm mounting hole
- Momentary Action DPDT
- Black Actuator
- Positive Snap Action

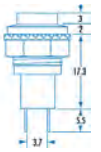


Rating	Type	Cat.	Qty 1+	Qty 10+	Qty 25+
120VAC 3A	DPDT	SP0714	$8.95	$8.05	$7.15

SPST Panel Mount

Very attractive small round momentary push on switch, with black body and black actuator, rated @ 1.5A 250VAC.

- Contact Arrangement SPST N.O.
- Cutout is 12.5mm
- Solid construction

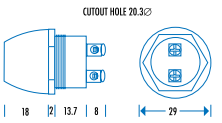


Rating	Type	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 1.5A	SPST	SP0700	$3.95	$3.45	$3.15

SPST Large Splashproof Pushbutton Switch

Plastic housing with brass 24VDC, 10A contacts. Plastic housing with protective rubber cap for harsh environments.

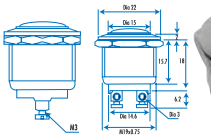
- Requires 22mm mounting hole
- Screw terminals
- Ideal for horn button, starter motor activation, etc
- Contact Arrangement SPST N.O.



Rating	Type	Cat.	Qty 1+	Qty 10+	Qty 25+
24VDC, 10A	SPST	SP0732	$6.95	$6.25	$5.55

SPST Metal Finish Pushbutton

- Silver metal body
- Rated 8A @ 125VAC or 4A @ 250VAC
- Momentary action
- 19mm mounting hole
- Screw terminal termination
- Contact Arrangement SPST N.O.

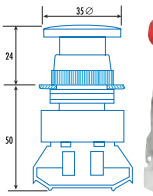


Rating	Type	Cat.	Qty 1+	Qty 10+	Qty 25+
125VAC 8A	SPST	SP0755	$6.95	$6.25	$5.55

Latching Emergency Stop Switch

Essential for installations of industrial or lab equipment. Latching actuator with rotating release and normally closed contacts. When the actuator is pushed in, the normally closed contacts open and the switch is latched, ensuring the equipment can't be operated until the switch is intentionally disengaged by rotating the actuator and releasing. It has two independent sets of contacts; normally open and normally closed.

- Configuration: 2 contact sets, normally closed (RED) & normally open (GREEN)
- Actuation: Push off, rotate on
- Contact Rating: 125VAC 6A, 300VAC 3A
- Mounting Hole: 22mm



Rating	Cat.	Qty 1+	Qty 10+	Qty 25+
125VAC 6A	SP0786	$14.95	$13.45	$11.95

Push Button Switch Caps

Black caps which press fit over Push Button switches with a shaft diameter of 2.54mm (0.1inch). OD: 5mm, Height: 5mm

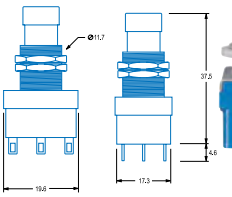
	Cat.	Qty 1+	Qty 10+	Qty 25+
Pkt 10	SP0596	$4.95	$4.45	$3.90

FOOT SWITCHES

3PDT Heavy Duty Foot Switch

Being 3 pole means you can wire your stompbox projects to be true bypass. It also has a low profile body so it can be accommodated in shallow enclosures and it has a solid, positive click on/off action. Heavy duty for the rough and tumble world of rock n' roll.

- Push on - push off
- 250VAC 2A rated
- Hole size: 12mm

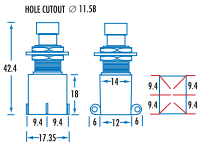


Rating	Type	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 2A	3PDT	SP0766	$15.95	$13.95	$12.45

DPDT Heavy Duty Foot Switch

The alternative action switch (push on, push off).

- Contact rating with resistive load 2A@250VAC
- Contact resistance <0.08Ω



Rating	Type	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 2A	DPDT	SP0764	$9.95	$8.95	$7.95

Foot Switch

Momentary action and can be wired to be either push-on or push-off. Rated at 250V 10 amp. The switch has a positive switch feel and an audible "click" when pressed.

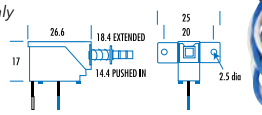
- Switch size 80(W) x 80(L) x 30(D)mm
- Colour is grey, cable is 850mm long

Rating	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 10A	SP0760	$24.95	$22.35	$19.70

ATX Computer Power Supply Switch

Replacement Power Switch. 250VAC 10A*.
Complete with connecting cable & 2 pin plug.

**Note: rating for switch only (not header socket).*



Rating	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 10A	SP0748	$14.95	$13.35	$11.70

TOGGLE SWITCHES:

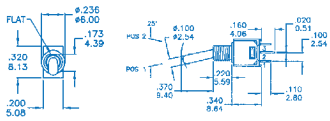
LIFE
LIFETIME GUARANTEE

SCANAR

Specifications	Sub Miniature	Miniature
Electrical Life (Make - And - Break Cycles At Full Load)	30,000	40,000
Contact Resistance (@2 - 4VDC @ 100mA)	20mΩ	10mΩ
Insulation Resistance (Any Contact to Body)	1000MΩ	1000MΩ
Dielectric Strength (@ Sea Level)	1000VRMS	1000VRMS
Contact Rating (With Resistive Load)	1A @ 250VAC	2A @ 250VAC
Contact Rating (With Resistive Load)	3A @ 28VAC	5A @ 28VAC

Sub-Miniature

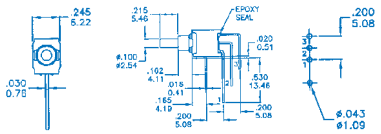
SPDT - SOLDER TAG - THREADED BUSH

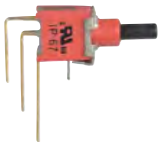


Brackets Indicate Switch Position	Cat.	Qty 1+	Qty 10+	Qty 25+
SPDT (on - on)	ST0300	$2.95	$2.60	$2.30

SPDT - HORIZONTAL PCB MOUNT (PUSHBUTTON)

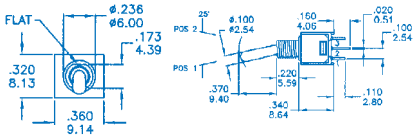
Momentary on when depressed.





Brackets Indicate Switch Position	Cat.	Qty 1+	Qty 10+	Qty 25+
SPDT (on-mom)	SP0380	$4.95	$4.45	$3.95

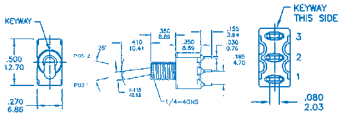
DPDT - SOLDER TAG - THREADED BUSH



Brackets Indicate Switch Position	Cat.	Qty 1+	Qty 10+	Qty 25+
DPDT (on - on)	ST0310	$3.45	$3.10	$2.75

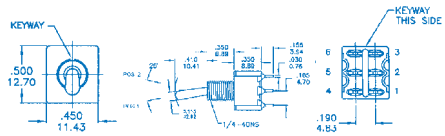
Miniature

SPDT - SOLDER TAG WITH THREADED BUSH



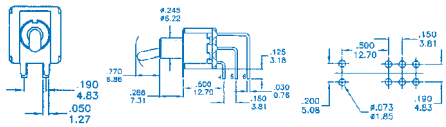
Brackets Indicate Switch Position	Cat.	Qty 1+	Qty 10+	Qty 25+
SPDT (on - on)	ST0335	$2.95	$2.60	$2.30
SPDT Centre Off (on-off-on)	ST0336	$3.45	$3.05	$2.75

DPDT - SOLDER TAG WITH THREADED BUSH



Brackets Indicate Switch Position	Cat.	Qty 1+	Qty 10+	Qty 25+
DPDT (on - on)	ST0355	$3.75	$3.30	$2.95
DPDT Centre Off (on - off - on)	ST0356	$4.50	$3.95	$3.60
DPDT Mom Centre Off (mom-off-mom)	ST0358	$4.95	$4.45	$3.90
DPDT Mom (on - mom)	ST0357	$4.50	$3.95	$3.60

DPDT - HORIZONTAL PCB MOUNT

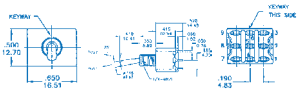


Brackets Indicate Switch Position	Cat.	Qty 1+	Qty 10+	Qty 25+
DPDT Threaded Bush (on - on)	ST0365	$4.95	$4.45	$3.90

Miniature (Continued)

3PDT MINI

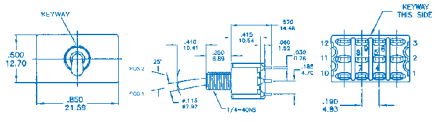
Hole cutout 6mm



Brackets Indicate Switch Position	Cat.	Qty 1+	Qty 10+	Qty 25+
3PDT (on - on)	ST0505	$7.95	$6.95	$6.25

4PDT MINI

Hole cutout 6mm

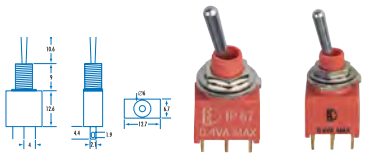


Brackets Indicate Switch Position	Cat.	Qty 1+	Qty 10+	Qty 25+
4PDT (on - on)	ST0506	$8.95	$7.95	$6.95

Sealed Miniature

Ideal for use in wet or moist areas.

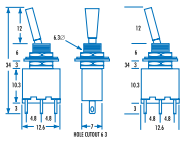
- Rated at 250VAC, 2A
- Splashproof to IP54



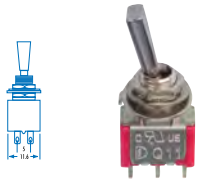
Brackets Indicate Switch Position	Cat.	Qty 1+	Qty 10+	Qty 25+
SPDT (on - on)	ST0554	$6.95	$6.25	$5.50
DPDT (on - on)	ST0555	$7.95	$6.95	$6.25

Miniature Flattened Actuator

ST0546 hole cutout 6.3mm



ST0547 hole cutout 6.0mm

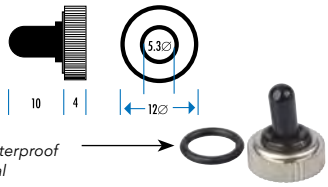


Brackets Indicate Switch Position	Cat.	Qty 1+	Qty 10+	Qty 25+
SPDT (on - on)	ST0546	$5.50	$4.90	$4.30
DPDT (on - on)	ST0547	$5.95	$5.25	$4.75

Rubber Boot with Seal to Suit Mini Toggles

This waterproof hood replaces the standard mounting nut and has an integrated 'O' ring to seal your equipment from outside moisture.

- Suits our mini toggle switches
- True waterproof seal



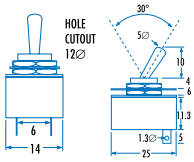
Cat.	Qty 1+	Qty 10+	Qty 25+
ST0594	$2.65	$2.35	$2.10

Standard Panel Mount Toggle Switches

SPST

Body size 26 x 14mm, clearance 20.5mm.

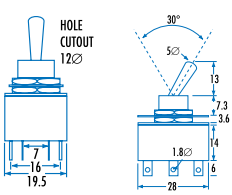
- Mounting hole 12mm
- Rated 2A 250V
- Solder terminals



Brackets Indicate Switch Position	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 2A (on - off)	ST0570	$2.95	$2.65	$2.35

DPDT

- Body size 29.5 x 18mm
- Clearance 23mm
- Mounting hole 12mm
- Rated 3A 250V
- Solder terminals



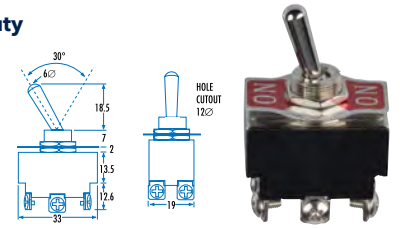
Brackets Indicate Switch Position	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 3A (on - off)	ST0572	$3.45	$3.10	$2.75

TOGGLE SWITCHES CONTINUED

DPDT - Extra Heavy Duty

Rated at 6A 250VAC, this switch will handle mains power switching.

- Screw terminals
- 12mm mounting hole

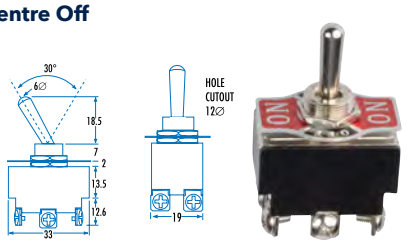


Brackets Indicate Switch Position	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 6A (on - on) DPDT	ST0575	$5.95	$5.35	$4.75

DPDT - Heavy Duty Centre Off

Huge 10A 125V rating, chrome toggle with on/off indicator plate.

- DPDT centre off. Body size 35 x 20mm,clearance 26mm, mounting hole 12mm
- Screw terminals. Same physical size as ST0575 above

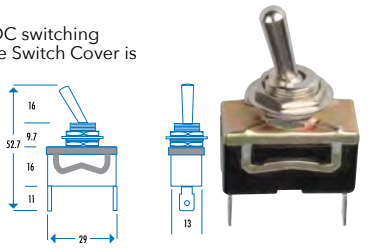


Brackets Indicate Switch Position	Cat.	Qty 1+	Qty 10+	Qty 25+
125VAC 10A (on - off - on) DPDT	ST0576	$5.95	$5.35	$4.75

SPST

Ideal for any high current 12VDC switching application. Our ST0578 Missile Switch Cover is perfectly suited to this switch.

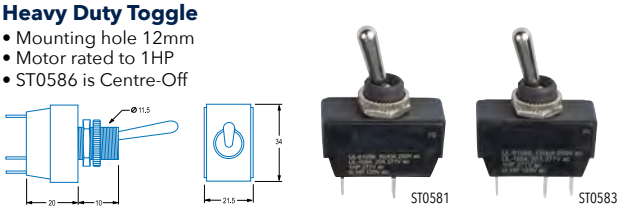
- Body size 29.5 x 17mm
- Mounting hole 12mm
- Rated 20A 12VDC



Brackets Indicate Switch Position	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC 20A Momentary (off - mom)	ST0577	$6.95	$6.25	$5.55
12VDC 20A Toggle (on - off)	ST0579	$6.95	$6.25	$5.55

Heavy Duty Toggle

- Mounting hole 12mm
- Motor rated to 1HP
- ST0586 is Centre-Off



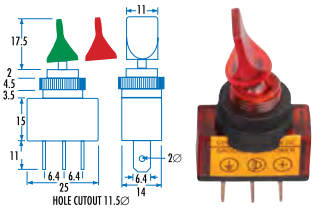
12VDC	250VAC		Cat.	Qty 1+	Qty 10+	Qty 25+
20A	20A	SPST	ST0581	$6.95	$6.25	$5.55
20A	20A	SPDT	ST0583	$7.95	$7.15	$6.35
20A	16A	DPDT	ST0585	$9.95	$8.95	$7.95
20A	16A	DPDT - C/Off	ST0586	$9.95	$8.95	$7.95

12V SPST Illuminated Duckbill Actuator

Actuator illuminates when switch is on.

Two colours available.

- Rated at 12VDC 10A SPST
- QC tab termination: 6.8mm (PT4507)



Brackets Indicate Switch Position	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC 10A Red (on - off) SPST	ST0580	$3.95	$3.45	$3.15
12VDC 10A Green (on - off) SPST	ST0582	$3.95	$3.45	$3.15

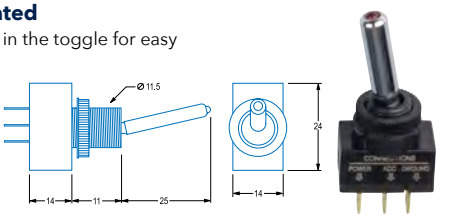
Find Out More In Store

Our staff offer friendly and helpful service. We're here to help.

12V SPST Illuminated

Illuminated by an LED in the toggle for easy identification.

- Illuminated red
- Rated for 12VDC 20A
- Mounting hole 11.5mm

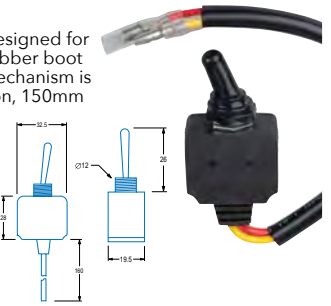


		Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC 20A	SPST	ST0587	$8.95	$8.05	$7.15

SPST 24V 15A Sealed Toggle

This large toggle switch is specially designed for marine conditions. A weatherproof rubber boot covers the actuator, and the switch mechanism is encapsulated in rubber. For this reason, 150mm fly leads are attached instead of the usual terminals. Not only limited to marine use, it can also be used as an ultra-durable switch in many applications.

- Ideal for marine or automotive use
- Max volt rating: 24V @ 15 amps



		Cat.	Qty 1+	Qty 10+	Qty 25+
24VDC 15A	SPST	ST0574	$14.95	$13.45	$11.95

Missile Switch Protective Cover

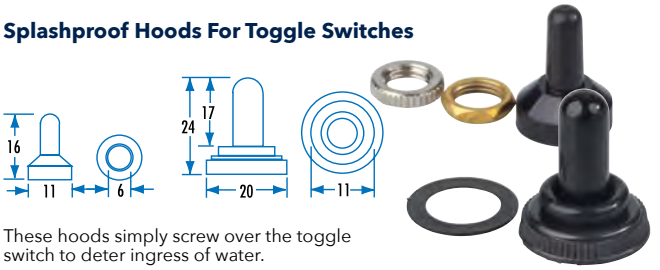
Military style missile switch cover featuring a heavy duty hinged, spring return protective cover. Covers turn switch off when snapped down. Fit any toggle switch with a 12mm mounting hole and appropriate length actuator.

Switch (Cat. ST0579) shown mounted in missile cover (switch not included).

When cover is down, actuator cannot move.

	Cat.	Qty 1+	Qty 10+	Qty 25+
Red	ST0578	$8.95	$8.05	$7.15
Carbon Fibre Style	ST0584	$11.95	$10.45	$9.45

Splashproof Hoods For Toggle Switches



These hoods simply screw over the toggle switch to deter ingress of water.

MINIATURE - INCLUDES NUTS FOR BOTH MINI & ULTRA-MINI TOGGLE SWITCHES.

Cat.	Qty 1+	Qty 10+	Qty 25+
ST0590	$1.85	$1.65	$1.45

STANDARD (LARGE)

Cat.	Qty 1+	Qty 10+	Qty 25+
ST0592	$2.85	$2.53	$2.23

Arcade Joystick with Microswitches

Solidly built joystick is ideal for arcade games and emulators or anything that needs digital directional controls.

- SPST Microswitches for reliable operation
- Adjustable restrictor plate with options for 2 way, 4 way and 8 way
- Metal mounting plate and main shaft
- Removable knob for easy mounting

	Cat.	Qty 1+	Qty 10+	Qty 25+
Arcade Joystick	SM1052	$24.95	$22.45	$19.95

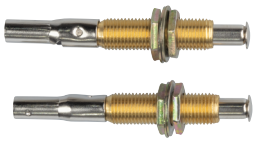
TAMPER SWITCHES

Alarm Tamper Style

This switch mounts behind an alarm module, bell or other item. If the device is tampered with or pulled from the wall, the alarm will be triggered. SPST. 18mm mounting hole. Contacts close when button depressed.

		Cat.	Qty 1+	Qty 10+	Qty 25+
SPST	Each	LA5066	$3.95	$3.55	$3.15

Tamper (Pin) Style - 2 Pack



Low cost spring loaded switch, simply make to frame (or earth) when pin is released i.e. by operating car or cabinet door, etc. 57mm overall, 12mm pin travel.

- Bullet connector termination

	Cat.	Qty 1+	Qty 4+	Qty 8+
Pack of 2	LE8775	$5.95	$5.25	$4.75

Van Sliding Door Style

Double action sliding door switch, primarily designed for van doors and tailgates. Supplied with rubber mounting plates, screws, template stickers and installation instructions.

- Contacts are rated at a massive 20A @ 12V

Rating		Cat.	Qty 1+	Qty 2+	Qty 4+
12VDC 20A	Each	LE8779	$18.95	$16.95	$14.95

Metal Tamper (Pin) Style - 2 Pack

Ideal for car bonnets, this heavy duty pin switch is nickel plated for protection from corrosion. The plunger is plastic and can be cut to suit the required length/depth. Supplied with locking nuts and star washer. The bezel's mounting depth is also adjustable. Termination is via a 6.4mm spade lug.

- Length (main body): 38mm
- Including plug & lug: 70mm
- Shaft diameter: 7.75mm
- Fascia nut size: 11mm
- Locking nut size: 12mm
- Travel (max): 13.5mm

	Cat.	Qty 1+	Qty 2+	Qty 4+
Pack of 2	LE8776	$7.95	$6.95	$6.25

Metal Fascia Inset Pin Switch - 2 Pack

Inset pin switch with plated metal fascia. Suitable for many cars as a replacement door switch. The sturdy plunger can be cut to required length. Termination via right angle 6.4mm spade lug.

- Fascia: 34.5 x 16.5mm
- Pin: 27(L) x 8(dia)mm
- Overall depth: 51mm
- Travel (max): 8mm
- Depth Behind Fascia: 15mm (not incl. lug & pin)

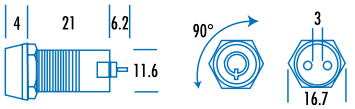
	Cat.	Qty 1+	Qty 2+	Qty 4+
Pack of 2	LE8777	$7.95	$6.95	$6.25

BARREL LOCKS

SPST Barrel Key, Mini

Chrome plated SPST mini key switch features spring return momentary operation and is supplied with two mini barrel keys. Requires 28mm mounting depth and a panel cutout of 12mm.

- Contact rating: 0.5A@250VAC / 1A@125VAC

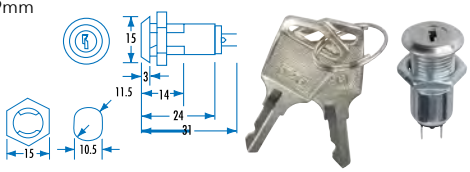


Rating		Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 500mA	SPST	SM1034	$12.95	$11.45	$9.95

SPST Standard Key, Mini

2 keys supplied.

- Panel cutout 12mm
- Mounting depth 29mm
- Contact rating: 1A 125VAC 0.5A 250VAC

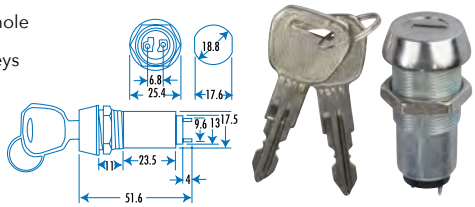


Rating		Cat.	Qty 1+	Qty 10+	Qty 25+
125VAC 1A	SPST	SM1027	$9.95	$8.75	$7.75

SPST Standard Size

Solid barrel type.

- 19mm mounting hole
- SPST action
- Supplied with 2 keys
- Rated @ 250V 2A

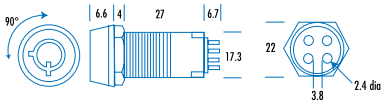


250VAC 2A		Cat.	Qty 1+	Qty 10+	Qty 25+
Random Keys		SM1030	$14.95	$13.45	$11.95
Keyed Alike	Type A	SM1029	$14.95	$13.45	$11.95
Keyed Alike	Type B	SM1031	$14.95	$13.45	$11.95

DPST Change-Over Key Switch

Uses tubular keys with black plastic inserts to easily identify them. It has 2 positions and the key is removable from both. There are 4 connection terminals, is a change-over type - ie. connection DPST.

- Contact rating: 2A, 250VAC.



Rating	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 2A	SM1032	$16.95	$14.95	$13.45

MERCURY & REED SWITCHES

SPST Mini Mercury

With a robust plastic housing, this switch has a mounting tab - you can screw it down - or use the self adhesive strip supplied. It has a 30cm lead. Switch contacts are open when the device is mounted horizontally. Dimensions: 33(L) x 8(W) x 8.5(D)mm.

	Cat.	Qty 1+	Qty 10+	Qty 25+
SPST	SM1044	$5.95	$5.35	$4.75

SPST MERCURY SWITCH

Glass encapsulated

- 125VAC 3 amp AC. SPST
- Size glass 18(L)mm x 5.5mm dia

Rating		Cat.	Qty 1+	Qty 10+	Qty 25+
125VAC 3A	SPST	SM1035	$2.75	$2.45	$2.15

NC Reed Switch*

Ideal for burglar alarms.

- Total length: 44mm
- Glass length: 14mm
- Contact rating: 10W
- Switching voltage: 200VDC (max)
- Switching current: 0.5A (max)
- Carrying current: 1.0A (max)

Normally open, but closed when near magnet

Rating	Cat.	Qty 1+	Qty 10+	Qty 25+
200VDC 500mA	SM1002	$2.45	$2.20	$1.95

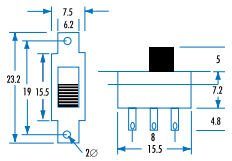
SLIDE & MICRO SWITCHES

SLIDE SWITCHES:

DPDT Panel Mount Sub Miniature

Break before make (non shorting contacts).

- Size 23(L) x 7(W)mm
- Actuator height 5mm
- Mounting holes 19mm apart
- Screws to mount switch use Cat. HP0390

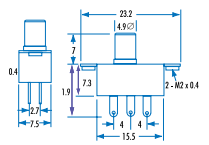


		Cat.	Qty 1+	Qty 10+	Qty 25+
50VDC 500mA	DPDT	SS0852	$1.65	$1.45	$1.30

DPDT Panel Mount Sub Miniature

(Spun aluminium actuator)

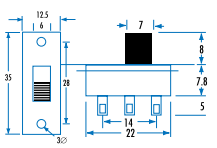
- Panel mount
- Size 23(L) x 7(W)mm
- Actuator height 7mm
- Mounting holes 19mm apart



		Cat.	Qty 1+	Qty 10+	Qty 25+
50VDC 500mA	DPDT	SS0812	$1.65	$1.45	$1.30

DPDT Panel Mount Miniature

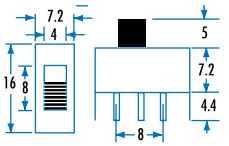
- Size 35(L) x 13(W)mm
- Actuator height 6mm
- Mounting holes 28mm apart
- 3mm diameter holes for screws



		Cat.	Qty 1+	Qty 10+	Qty 25+
50VDC 500mA	DPDT	SS0821	$1.65	$1.45	$1.30

DPDT PCB Mount Sub Miniature

- Size 16(L) x 7.2(W)mm
- Actuator height 5mm



		Cat.	Qty 1+	Qty 10+	Qty 25+
125VDC 300mA	DPDT	SS0823	$1.65	$1.45	$1.30

SPDT Micro Slide Switch

This is the tiniest slide switch we have ever seen, and we're sure it will be a great addition for all those projects that need a small on-off switch. The 0.1" pitch suits protoboard and even breadboards, and allows multiple switches to be stacked side-by-side if needed.

- 0.5A at 24VDC
- 6.5mm body height
- 5mm lead length- long enough to bend for right angle mounting
- SPDT (centre common) for changeover contacts
- 11.5mm x 10mm x 2.5mm

		Cat.	Qty 1+	Qty 10+	Qty 25+
24VDC, 0.5A	SPDT	SS0834	$1.95	$1.75	$1.55

Inline JST Switch Kit

JST switches and connectors provide an unobtrusive solution to power control. They are small so will fit comfortably in the chassis of an RC vehicle. This kit includes a JST switch with a male and female JST connector on each end attached to a 140mm wire. Great for hobby applications such as model trains, remote control helicopters and cars, or simple around the house projects that require discrete and simple switching.

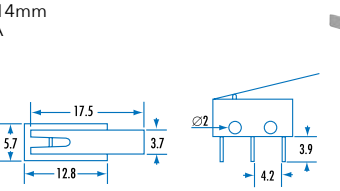
- Includes mounting bracket and screws
- Switch dimensions: 25(L) x 25(H) x 9(D)mm

	Cat.	Qty 1+	Qty 10+	Qty 50+
	SS0826	$3.95	$3.45	$3.15

MICRO SWITCHES

SPDT Subminiature

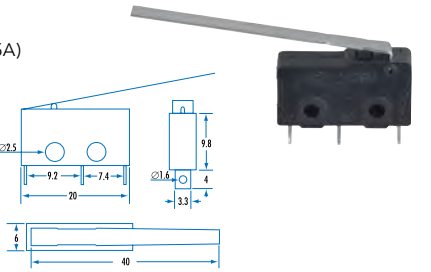
- Actuator length 14mm
- Rated at 125V 3A
- Solder terminals



Rating	Cat.	Qty 1+	Qty 10+	Qty 25+
125V 3A SPDT On - On	SM1036	$3.95	$3.45	$3.15

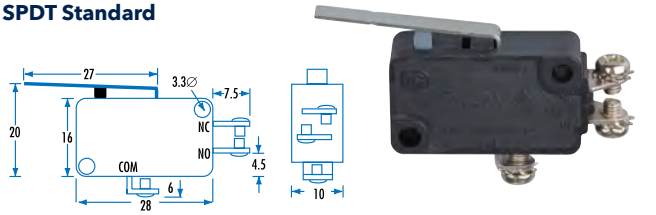
SPDT Miniature

- Actuator length 37.5mm
- Rated at 125V 5A (250V 5A)
- Solder terminals



Rating	Cat.	Qty 1+	Qty 10+	Qty 25+
125V 5A SPDT	SM1038	$4.95	$4.45	$3.90

SPDT Standard



Rating	Cat.	Qty 1+	Qty 10+	Qty 25+
240VAC 10A SPDT On - On	SM1040	$3.75	$3.30	$2.95

SPDT Standard Micro Switch

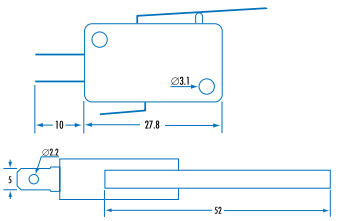
Standard sized micro switch without lever, ideal for those applications where a lever is not needed, and a simple button is all that is required. Suits SP0662, SP0664, SP0665, SP0666 and SP0669 Arcade Pushbuttons.

- SPDT (Changeover) contacts rated at 5A, 240V

	Cat.	Qty 1+	Qty 10+	Qty 25+
240VAC 5A SPDT	SM1050	$3.50	$3.15	$2.80

SPDT Extended Actuator

- Actuator length 51.3mm
- Rated at 250VAC 5A
- QC tab termination 4.8mm



Rating	Cat.	Qty 1+	Qty 10+	Qty 25+
250VAC 5A SPDT On - On	SM1039	$3.75	$3.30	$2.95

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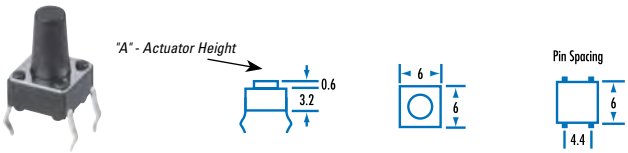
TACTILE SWITCHES

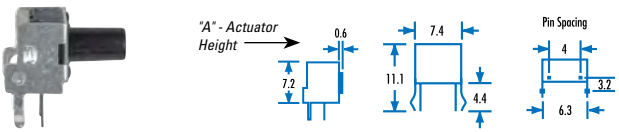
SPST Micro

Specifications	ALL MODELS
Rating	12VDC 50mA
Operating Temp	-20°C to 70°C
Contact Resistance	100mΩ Max.
Insulation Resistance	100MΩ Min at 100VDC
Withstand Voltage	250VAC for 1 minute
Contact Arrangement	SPST N.O.
Action	Momentary

VERTICAL MOUNT



RIGHT-ANGLE VERSION



Vertical Mount	Actuator	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC 50mA	0.7mm	SP0600	$0.95	$0.85	$0.75
12VDC 50mA	1.4mm	SP0601	$0.95	$0.85	$0.75
12VDC 50mA	3.5mm	SP0602	$0.95	$0.85	$0.75
12VDC 50mA	6.0mm	SP0603	$0.95	$0.85	$0.75

Right angle	Actuator	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC 50mA	0.7mm	SP0604	$1.00	$0.90	$0.80
12VDC 50mA	1.4mm	SP0605	$1.00	$0.90	$0.80
12VDC 50mA	3.5mm	SP0606	$1.00	$0.90	$0.80
12VDC 50mA	6.0mm	SP0607	$1.00	$0.90	$0.80

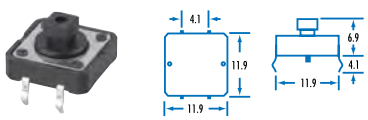
SPST PCB Mount

Withstand Voltage:
- 250VAC for 1 minute

Contact Arrangement:
- SPST N.O
  Momentary action

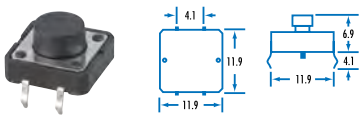
Specifications	BOTH MODELS
Rating	12VDC 50mA
Operating Temperature	-20°C to 70°C
Contact Resistance	100mΩ Max.
Insulation Resistance	100MΩ Min. at 100VDC

SQUARE



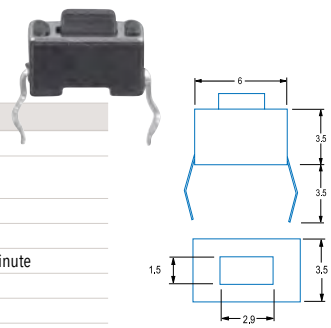
See website for full data sheet.

ROUND



Rating	Action	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC 50mA	Square	SP0608	$1.25	$1.10	$0.97
12VDC 50mA	Round	SP0609	$1.25	$1.10	$0.97

SPST PCB - 2 Pin

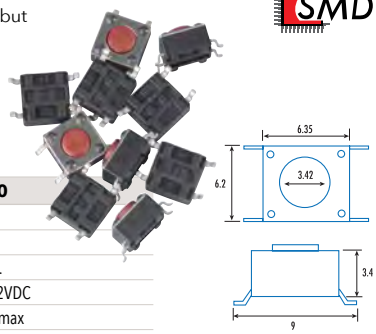


Specifications	SP0611
Rating	12VDC 50mA
Operating Temperature	-16°C to 60°C
Contact Resistance	100mΩ Max.
Insulation Resistance	100MΩ
Withstand Voltage	250VAC for 1 minute
Contact Arrangement	2 pin SPST N.O
Action	Momentary
Size	6 x 3.5 x 3.5mm

Rating	Action	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC 50mA	PCB Mount	SP0611	$0.95	$0.85	$0.75

SPST SMD - Pack of 10

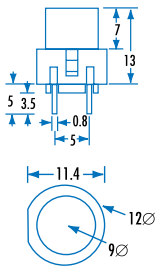
This switch is similar to SP0600 but surface mount.



Specifications	SP0610
Size	6x6mm
Height	3.85mm
Contact Arrangement	SPST N.O.
Contact Rating	50mA, 12VDC
Contact Resistance	100mΩ max

Rating	Pack	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC 50mA	10	SP0610	$13.95	$12.35	$10.95

SPST PCB Mount Snap Action - Round

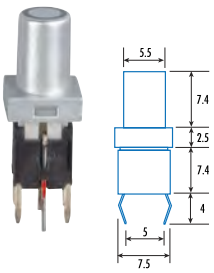


PCB Mount, single pole, momentary. Suitable for keyboards, security systems, etc. Available in 5 colours.
- These switches are normally open SPST. When button is depressed the switch closes, but only while the button is down
- Contact rating 10mA/35VDC. Pin spacing 5mm

Rating	Colour	Cat.	Qty 1+	Qty 10+	Qty 25+
35VDC 10mA	Red	SP0720	$1.45	$1.30	$1.15
35VDC 10mA	Black	SP0721	$1.45	$1.30	$1.15
35VDC 10mA	Yellow	SP0722	$1.45	$1.30	$1.15
35VDC 10mA	White	SP0723	$1.45	$1.30	$1.15
35VDC 10mA	Green	SP0724	$1.45	$1.30	$1.15

SPST PCB Mount with LED

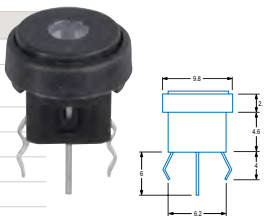
- Vertical
- Metallic look



Specifications	ALL MODELS
Rating	12VDC 50mA
Operating Temperature	-50°C to 70°C
Contact Resistance	100mΩ Max.
Insulation Resistance	100MΩ min at 100VDC
Withstand Voltage	250VAC for 1 minute
Contact Arrangement	SPST N.O.
Action	Momentary
LED Power Supply	3.5-4VDC @ 25mA

Rating	Colour	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC 50mA	Red	SP0612	$4.45	$3.95	$3.45
12VDC 50mA	Green	SP0613	$4.45	$3.95	$3.45
12VDC 50mA	Blue	SP0614	$4.45	$3.95	$3.45

SPST PCB Mount - Vertical with LED



Specifications	ALL MODELS
Rating	12VDC 50mA
Operating Temperature	-50°C to 70°C
Contact Resistance	100mΩ Max.
Insulation Resistance	100MΩ min at 100VDC
Withstand Voltage	250VAC for 1 minute
Contact Arrangement	SPST N.O.
Action	Momentary
LED Power Supply	3.5-4VDC @ 25mA

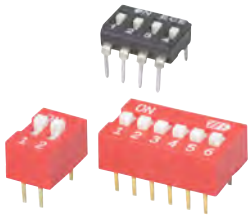
Rating	Colour	Cat.	Qty 1+	Qty 10+	Qty 25+
12VDC 50mA	Red	SP0620	$3.95	$3.45	$3.15
12VDC 50mA	Green	SP0621	$3.95	$3.45	$3.15
12VDC 50mA	Blue	SP0622	$3.95	$3.45	$3.15

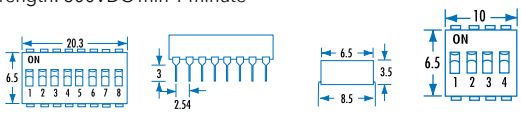
INDEX TYPE SWITCHES

DIP SWITCHES

DIP Switches

- End stackable
- Moulded 0.3" IC packing outline for automatic insertion
- Smaller sized
- Twin contact design
- Gold plated contact & tin plated terminals
- Switching: 25mA 24VDC
- Non-Switching: 100mA 50VDC
- Contact Resistance: Initial 50mΩ max
- Dielectric Strength: 500VDC min 1 minute

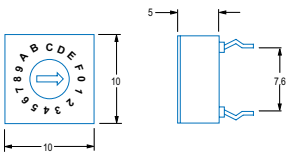




Type	Description	Cat.	Qty 1+	Qty 10+	Qty 25+
2 Way	4 pin DIP	SM1012	$1.55	$1.35	$1.20
3 Way	6 pin DIP	SM1013	$1.75	$1.55	$1.40
4 Way	8 pin DIP (low profile)	SM1020	$2.65	$2.35	$2.10
6 Way	12 pin DIP	SM1015	$2.15	$1.90	$1.70
8 Way	16 pin DIP (low profile)	SM1024	$2.95	$2.65	$2.35
10 Way	20 pin DIP	SM1017	$2.65	$2.30	$2.07
12 Way	24 pin DIP	SM1018	$2.90	$2.60	$2.30

Binary Coded DIL Rotary Switches

These tiny switches are designed for PCB use. These pins are moulded in and fully sealed. The body is moulded in UL 94V-0 flame-retardant plastic.



Specifications	BOTH MODELS
Contact Rating	Switching 25mA@24VDC
Non Switching	100mA @50VDC (dry contact switching)
Contact Resistance	100mΩ max
Insulation Resistance	1,000MΩ (min) at 100VDC
Dielectric Strength	250VAC for 1 minute
Temp (Operating)	-25°C to 70°C
Max Rotational Torque Required	500gf-cm
Operational Life	2,000 steps/min, switching
Solderability After flux	230 +/-5°C for 5 +/- 0.5 sec

Binary Coded Hex	Cat.	Qty 1+	Qty 10+	Qty 25+
0 through F output	SR1220	$4.95	$4.45	$3.95

Binary Coded Decimal	Cat.	Qty 1+	Qty 10+	Qty 25+
0 through 9 output	SR1222	$4.95	$4.45	$3.95

Rotary Encoder with Pushbutton

Quadrature encoded rotary encoder with pushbutton can be used to provide an intuitive interface to your next project. Similar to the interface found on many 3D Printers. PCB mount with five terminals. Thirty detents/ fifteen pulses per revolution. Encoder has two SPST contacts sharing a common, pushbutton switch is SPST/NO.

- Shaft with flat for grub screw
- Three terminals for rotary encoder
- Two independent terminals for pushbutton
- Two large mechanical lugs for PCB mounting

	Cat.	Qty 1+	Qty 10+	Qty 25+
Rotary Encoder with Pushbutton	SR1230	$9.95	$8.95	$7.95

Sealed PCB Rotary Switches

These switches have a removable ring with tab which can be inserted into the switch several ways to your particular requirements. For example, if you purchased a 1 pole x 12 way (max) switch you could convert it to, say, 1 pole 7 way between stops. They have a standard 1/4," shaft. Panel hole 10mm.

1 YEAR WARRANTY

Contact rating 150mA at 240VAC.

Cutout 9.5mm.

1 POLE

Configured from 1 pole 2 position through to 1 pole 12 position.

2 POLE

From 2 pole 2 position to 2 pole 6 position

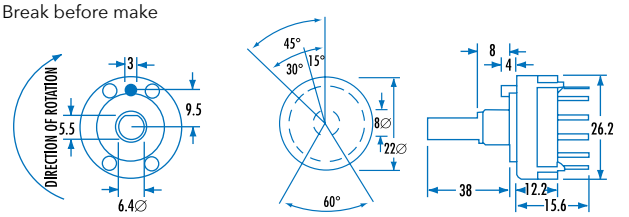
3 POLE

From 3 pole 2 position to 3 pole 4 position

4 POLE

4 pole, 2 and 3 position

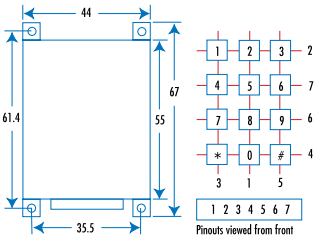
- Break before make



Rating	Type	Cat.	Qty 1+	Qty 10+	Qty 25+
240VAC 150mA	1 pole	SR1210	$4.95	$4.45	$3.95
240VAC 150mA	2 pole	SR1212	$4.95	$4.45	$3.95
240VAC 150mA	3 pole	SR1214	$4.95	$4.45	$3.95
240VAC 150mA	4 pole	SR1216	$4.95	$4.45	$3.95

12 Key Numeric Keypad

This telephone style keypad has many uses. It has 0-9, *, # - 3 x 4 way matrix.



Specifications	SP0770
Contact Rating	20mA, 24VDC
Contact Resistance	200Ω max
Life	1,000,000 cycles per key
Contact	Conductive rubber
Dimensions (Key Face)	44(W) x 54(H) x 5(D)mm
Colour	White keys on black background

Rating	Cat.	Qty 1+	Qty 10+	Qty 25+
24VDC 20mA	SP0770	$12.95	$11.45	$9.95

Product Data:

We have so much data and fact sheets, we cannot fit it all in our catalogue. Check out our website for over 4,000 pages of data!

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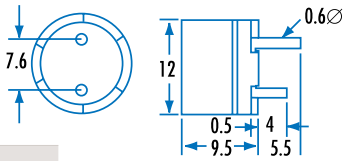
PIEZO BUZZERS

PCB Mount Mini PC Piezo

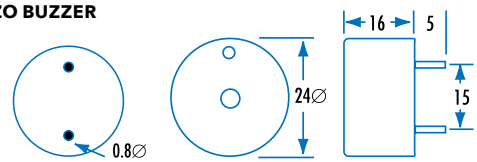
Ideal when you need to fit an alarm in a small place. It has its own built-in drive circuit. It offers low current consumption and it's sealed for DIP soldering & washing.



Specifications	AB3459
Operating Voltage	9 - 14V
Rated Voltage	12VDC
Current	30mA
SPL	85dBA/10cm
Frequency	2.3kHz
Weight	2.4 gram

Dia.	Height	Cat.	Qty 1+	Qty 4+	Qty 10+
12mm	9.5mm	AB3459	$4.95	$4.45	$3.90

PCB MOUNT PIEZO BUZZER

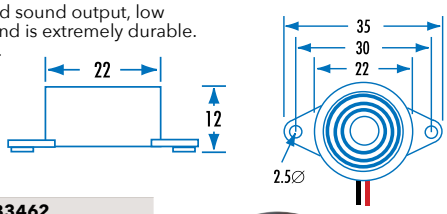


Specifications	AB3458
Operating Voltage	3 - 30VDC
Operating Freq	3.8 kHz
Current Draw	16mA max
SPL	85dB/30cm/12V

Dia.	Height	Cat.	Qty 1+	Qty 4+	Qty 10+
24mm	16mm	AB3458	$4.95	$4.45	$3.95

PIEZO BUZZER - MINI

It offers medium to loud sound output, low current consumption and is extremely durable. Supplied with fly leads.



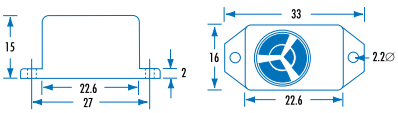
Specifications	AB3462
Operating Voltage	3-16VDC
Rated	12VDC
Freq	3.3kHz
Max Current at 12V	15mA
SPL	90dB

Dia.	Height	Cat.	Qty 1+	Qty 4+	Qty 10+
22mm	12mm	AB3462	$4.50	$4.05	$3.60

SURFACE MOUNT BUZZER

Handy solid state buzzer operates between 5-15VDC. Used in many applications.

Note: This is an electro-mechanical buzzer.



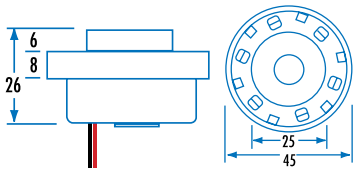
Specifications	AB3452
Operating Voltage	5-15VDC
Rated	12VDC
Max Current at 12V	40mA
SPL	79dB/1m

Dia.	Width	Height	Cat.	Qty 1+	Qty 4+	Qty 10+
31mm	16mm	15mm	AB3452	$4.50	$4.05	$3.60

p.B163 - tech talk on decibels

DUAL SOUND PIEZO INDUSTRIAL TYPE

Similar to SONALERT® earpiercing sound. Non inductive, operates from 1 - 13VDC. Now with both continuous tone and pulsed tone. Red & black for continuous, yellow & black for pulse tone. Ideal for most signalling applications.



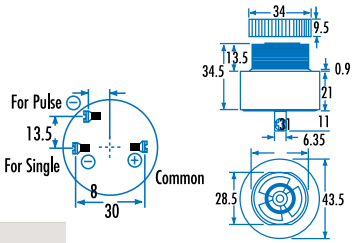
Specifications	AB3456
Operating Voltage	1 - 13VDC
Rated Voltage	12VDC
Current	Single tone 35mA, pulse 20mA
Frequency	2.9kHz
SPL	105dB/30cm single, 100dB/30cm pulse
Pulse Rate	2 - 7 pulse/sec
Mounting	1 x 3mm screw

Dia.	Height	Cat.	Qty 1+	Qty 4+	Qty 10+
45mm	26mm	AB3456	$9.95	$8.95	$7.95

PIEZO REVERSING ALARM AUTOMOTIVE TYPE

Available with both continuous and pulse tone. These are a heavy duty panel mounted piezo. They are very rigidly made and terminals are via screw down or 6.35mm quick disconnect.

- Similar to SONALERT®



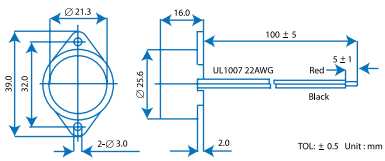
Specifications	AB3464
Operating voltage	4 - 16V
Rated voltage	12V
Max Current @ 12V	25 single, 20 pulse mA
Frequency	2.9kHz
SPL @ 12V	95 single, 90 pulse dB
Pulse Rate @ 12V	0.8 - 1.2 pulse/sec
Mounting Hole	29mm

Dia.	Height	Cat.	Qty 1+	Qty 4+	Qty 10+
43.5mm	34.5mm	AB3464	$14.95	$13.45	$11.95

WEATHERPROOF BUZZER 6-14VDC

Designed to withstand exposure to rain when mounted outdoors.

- Material: ABS UL-94 1/16" HB High Heat



Specifications	AB3466
Operating Voltage	6-14VDC
Rated Voltage	12VDC
Current	35mA @ 12V (max)
SPL	85dB / 1m
Frequency	2.8kHz 500Hz

Dia.	Height	Cat.	Qty 1+	Qty 4+	Qty 10+
26mm	16mm	AB3466	$19.95	$17.95	$15.95

4kHz Audio Transducer

This electro-acoustic transducer contains no electronics making it a versatile component for electronics projects. Apply an AC voltage input to the wires and it will generate sound pressure waves based on the frequency. Connect the wires to a ciruit input and it will generate an AC voltage when stimulated with a sound pressure wave making an efficient knock or vibration sensor.

Supplied in a black plastic casing for easy mounting it can also be deconstructed to suit alternate applications. Without a doubt this is one of our most popular components for a multitude of electronics projects.

- Resonant frequency: 4kHz +/- 0.5kHz
- Electrostatic Capacitance: 25,000pf +/- 30%

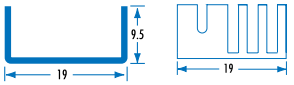
Dia.	Height	Cat.	Qty 1+	Qty 4+	Qty 10+
30mm	5mm	AB3442	$3.95	$3.55	$3.15

HEATSINKS & THERMAL PROTECTION

HEATSINKS

TO-220 Mini (6073B Type)

- Equivalent to popular 6073 type

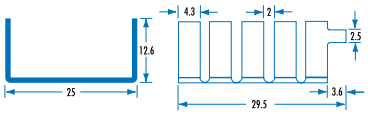


LIFETIME GUARANTEE

Thermal resistance	Cat.	Qty 1+	Qty 4+	Qty 10+
20°C/W	HH8502	$1.25	$1.10	$1.00

TO-220 (6021 Type)

- Solderable PCB mounting pins

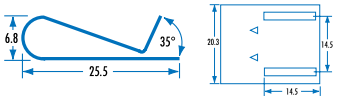


LIFETIME GUARANTEE

Thermal resistance	Cat.	Qty 1+	Qty 4+	Qty 10+
12°C/W	HH8504	$1.45	$1.30	$1.15

TO-220 Clip-On (6043 Type)

The heatsink will just clip over a device when required for permanent or temporary installation.



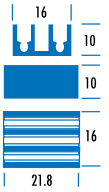
LIFETIME GUARANTEE

Thermal resistance	Cat.	Qty 1+	Qty 4+	Qty 10+
30°C/W	HH8503	$1.45	$1.30	$1.15

TO-220 10mm

These PCB mount heatsinks have two 'screw flute' channels to aid in fastening to a board or surface.

- 16(W) x 21.8(D) x 10(H)mm



LIFETIME GUARANTEE

Thermal resistance	Cat.	Qty 1+	Qty 4+	Qty 10+
30°C/W	HH8514	$1.75	$1.55	$1.40

TO-220 15.8mm

Same dimensions as our HH8514 only with longer fins. These PCB mount heatsinks have two tinned pins to aid in fastening the sink to a board or surface.

- 16(W) x 21.8(D) x 15.8(H)mm
- Pins 2mm dia. x 3mm long

LIFETIME GUARANTEE

Thermal resistance	Cat.	Qty 1+	Qty 4+	Qty 10+
19°C/W	HH8516	$1.75	$1.55	$1.40

PC Mount TO-3P

Will accept up to TO-3P size flat pack transistors. (This includes TO-220). Includes 2 PC pins, which help stabilise the heatsink and allow you to solder to PCB pads.

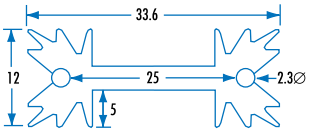
LIFETIME GUARANTEE

25MM HIGH (6098 TYPE)

- Size 33.6(W) x 12(D) x 25(H)mm Cat. HH8520

40MM HIGH (6099 TYPE)

- Size 33.6(W) x 12(D) x 40(H)mm Cat. HH8522



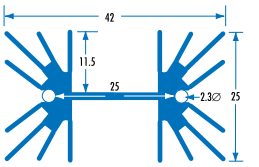
Thermal resistance	Cat.	Qty 1+	Qty 4+	Qty 10+
17°C/W	HH8520	$1.75	$1.55	$1.40
11°C/W	HH8522	$2.95	$2.65	$2.35

Heavy Duty TO-3P (ML97 Type)

Heavy duty version of the heatsinks described in other column.

- Solderable screw studs
- Size 42(W) x 25(D) x 38(H)mm

LIFETIME GUARANTEE

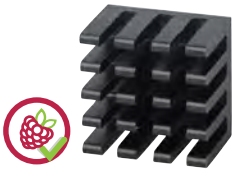


Thermal resistance	Cat.	Qty 1+	Qty 4+	Qty 10+
7.5°C/W	HH8526	$2.95	$2.65	$2.35

Heatsink Pin Grid Array

An aluminium heatsink with adhesive thermal transfer tape. Suitable for Raspberry Pi and other BGA devices.

- 15(L) x 15(W) x 11(H)mm



Thermal resistance	Cat.	Qty 1+	Qty 4+	Qty 10+
10°C/W	HH8581	$3.95	$3.55	$3.15

Heatsink Pin Grid Array with Adhesive Thermal Transfer Tape

LIFETIME GUARANTEE

This heatsink makes a perfect partner to Star LED modules. It doesn't get quicker or easier than this! Just peel the backing from the pre-mounted thermal transfer tape, press the Star LED (or whatever device) to the heatsink and SHAZAM!! It's ready to go! Don't be fooled by the compact size. The "pin grid array" design provides excellent low thermal resistance and heat dissipation. Sold individually.

- Dimensions: 21(L) x 21(W) x 6.2(H)mm

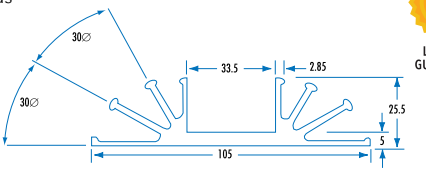
Thermal resistance	Cat.	Qty 1+	Qty 4+	Qty 10+
5.9°C/W	HH8580	$4.95	$4.45	$3.95

High Efficiency Fan Type

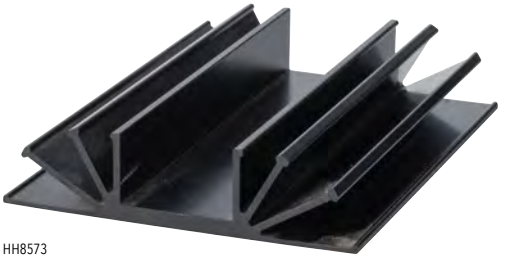
Available in various lengths.

- 105mm wide

LIFETIME GUARANTEE



HH8570



HH8573

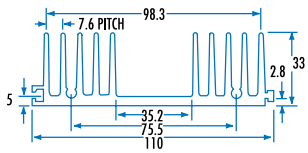
Length	Thermal resist.	Cat.	Qty 1+	Qty 4+	Qty 10+
55mm	2.5°C/W	HH8570	$8.95	$8.05	$7.15
72mm	2.2°C/W	HH8572	$10.95	$9.45	$8.45
135mm	1.1°C/W	HH8573	$17.95	$15.95	$13.95

HEATSINKS CONTINUED

Versatile Heavy Duty

- Allows horizontal & vertical mounting
- Length 72mm
- Undrilled

LIFE LIFETIME GUARANTEE

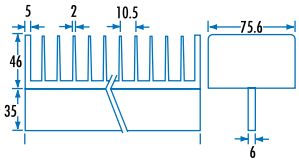


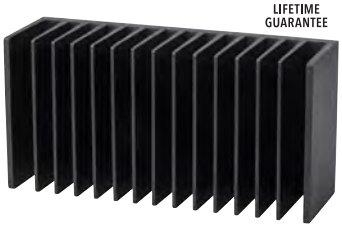
Thermal resistance	Cat.	Qty 1+	Qty 4+	Qty 10+
2.2°C/W	HH8566	$19.95	$17.95	$15.95

Diecast

- Dimensions: 150(L) x 75(H) x 46(D)mm

LIFE LIFETIME GUARANTEE





MADE IN

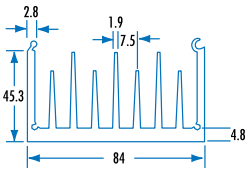
Thermal resistance	Cat.	Qty 1+	Qty 4+	Qty 10+
1.2°C/W	HH8555	$23.95	$21.45	$18.95

Fan Assisted-Type Heatsink

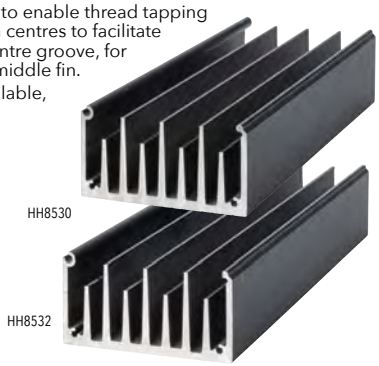
LIFE LIFETIME GUARANTEE

This heatsink is designed to mate with itself to form a tunnel. The heatsink extrusion has a screw flute centre to enable 4 x No.6 self-tapping screws to fasten an 80mm standard type fan on one (or both) end/s to drive air through the heatsink assembly. It is ideal for high power amplifiers and power supplies. The entire assembly, including fan/s can still fit inside a 2 x Rackunit (88mm) enclosure. The heatsink also features ribbed fins for extra surface area, a 4mm thick base to enable thread tapping and small vee grooves on 5mm centres to facilitate mounting hole location. The centre groove, for example, is directly below the middle fin.

- Two standard lengths are available, black anodised



Suitable fans are YX2512 (12VDC) or YX2510 (240VAC).



Thermal Characteristics		
Assembly Type	Cooling Mode	Rating (approx)
Single Length	Convection	0.83°C/W
Tunnel Assembly	Convection	0.70°C/W
Tunnel Assembly	Fan Assisted (single)	0.35°C/W
Tunnel Assembly	Fan Assisted (dual)	0.30°C/W

MADE IN

Length (mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
225	HH8530	$28.95	$25.95	$22.95
254	HH8532	$32.95	$28.95	$25.95

HEATSINK ACCESSORIES

Transistor Clamps

To clamp (TO-220) devices to a heatsink. Fasten down with a #6 self tapper or a 3mm machine screw & nut.

			Cat.	Qty 1+	Qty 10+	Qty 50+
Single	TO-220 Transistor Clamps	Pk 10	HH8600	$8.95	$7.95	$6.95
Single	TO-220 Transistor Clamps	Pk 100	HH8602	$24.95	$22.35	$19.70
Dual	TO-220 Transistor Clamps	Pk 100	HH8607	$29.95	$26.95	$20.95
Dual	TO-220 Transistor Clamp	ea	HH8610	$1.45	$1.30	$1.15

Heatsink Compound

Heat conducting paste facilitates heat transfer from semiconductors to heatsinks. One 10g tube will do up to 30 TO-3 package transistors.

- Non electrically conductive

	Cat.	Qty 1+	Qty 4+	Qty 10+
10g Tube	NM2010	$4.50	$4.05	$3.60
50g Syringe	NM2011	$9.95	$8.75	$7.75
150g Tube	NM2012	$19.95	$17.70	$15.70

25% Silver Heatsink Compound - 1.5 Gram Tube

Contains 25% Silver for more efficient heat transfer. Ready to use syringe. Please note that Silver Heatsink Compound does conduct electricity and care should be taken when being used.

	Cat.	Qty 1+	Qty 4+	Qty 10+
1.5g Tube	NM2013	$5.95	$5.25	$4.75

Thermal Transfer Tape 100 x 100 x 0.5mm - Pk 2

When it comes to attaching devices like star LED modules to heatsinks, it's often not easy because they don't have screw 'eyes' like a TO220 transistor package. Using this thermal transfer tape, it's a breeze. The material is self adhesive and provides good thermal conductivity making it easy for chipsets, LED modules, memory modules etc. 2pcs of 100mm x 100mm sheets supplied. Just cut to size. 0.5mm thickness.

Specifications	NM2790
Thermal Conductivity	1.6 W/m·k
Flammability Level	UL94V-0
Working Temperature Range	-60°C to +250°C
Insulation Strength	>7,000V/mm

	Cat.	Qty 1+	Qty 4+	Qty 10+
100x100mm	NM2790	$14.95	$13.45	$11.95

Heatsink Compound - 3g Syringe with Applicator

Features Nano Diamond for high thermal conductivity. It is electrically insulated so that you can apply to all electronic components and IC's and protects from short circuits.

- Massively improves thermal conductivity
- Complete insulation
- Thermal conductivity: >3.8W/m-K
- Thermal resistance: <0.087°C-in²/W
- Operating temperature: -50°C to 240°C

	Cat.	Qty 1+	Qty 4+	Qty 10+
3g Tube	NM2018	$8.95	$8.05	$7.15

Heatsink Compound - Adhesive

Non electrically conductive. One 5 gram tube will adhere up to 16 TO-3 package transistors.

	Cat.	Qty 1+	Qty 4+	Qty 10+
5g Tube	NM2014	$7.95	$6.95	$6.25

pick me FANS

	Size (mm)	Depth (mm)	Operating Voltage	Bearing Type	Air Volume (CFM)	Speed (RPM)	Connection	Housing	Tacho	Page
	5VDC AXIAL FAN									
YX2500	30	6	5VDC	Ball	3.09	8,000	Flylead	Plastic	No	A174
	12VDC AXIAL FANS									
YX2501	30	6	12VDC	Ball	3.09	8,000	Flylead	Plastic	No	A174
YX2503	40	10	12VDC	Sleeve	5.4	6,000	Flylead	Plastic	No	A174
YX2502	40	20	12VDC	Sleeve	7.6	7,000	Flylead	Plastic	No	A174
XC5054	40	10	12VDC	Ball	23.8	6,000	Flylead & Plug	Plastic	Yes	A174
YX2504	50	15	12VDC	Sleeve	16.6	5,500	Flylead	Plastic	No	A174
XC5055	50	10	12VDC	Ball	11.6	5,500	Flylead & Plug	Plastic	Yes	A174
YX2505	60	25.4	12VDC	Sleeve	20	4,000	Flylead	Plastic	No	A174
YX2512	80	25.4	12VDC	Sleeve	34	3,000	Flylead	Plastic	No	A175
YX2513	80	25.4	12VDC	Ball	34	3,000	Flylead	Plastic	No	A175
YX2523	80	25.4	12VDC	Ball	42	3,100	Flylead	Plastic	No	A175
YX2580*	80	25	12VDC	Magnetic	28.1	2,000	Flylead	Polycarbonate	No	A173
YX2570*	80	25	12VDC	Ball	20.7	1,600	3 Pin Molex	Polycarbonate	No	A173
YX2521	90	25	12VDC	Sleeve	59	3,000	Flylead	Plastic	No	A175
YX2582*	92	25	12VDC	Magnetic	39.8	2,000	Flylead	Polycarbonate	No	A173
YX2572*	92	25	12VDC	Ball	31.3	1,500	3 Pin Molex	Polycarbonate	No	A173
YX2518	120	25.4	12VDC	Ball	88	3,000	Flylead	Plastic	No	A175
YX2522	120	25	12VDC	Ball	88	3,000	Flylead	Plastic	No	A175
YX2584*	120	25	12VDC	Magnetic	64.3	1,500	Flylead	Polycarbonate	No	A173
YX2574*	120	25	12VDC	Ball	37	1,000	3 Pin Molex	Polycarbonate	No	A173
	12VDC BLOWER FANS									
YX2532	97 x 94	33	12VDC	Ball	26	3,600	Flylead	Plastic	No	A173
	24VDC AXIAL FAN									
YX2542	80	25.4	24VDC	Ball	40	3,200	Flylead	Plastic	No	A175
	240VAC AXIAL FANS									
YX2509	80	25.4	240VAC	Sleeve	23	2,800	Flylead	Metal	No	A176
YX2510	80	38	240VAC	Sleeve	30	2,800	Flylead	Metal	No	A176
YX2508	80	38	240VAC	Ball	30	2,800	Flylead	Metal	No	A176
YX2516	120	25.4	240VAC	Sleeve	80	2,350	Solder	Metal	No	A176
YX2514	120	38	240VAC	Sleeve	105	3,000	Solder	Metal	No	A176
YX2517	120	38	240VAC	Ball	105	3,000	Solder	Metal	No	A176
YX2520	150	55	240VAC	Ball	230	3,400	Use PS4160	Metal	No	A176

*Note: Fans with * on page A173 are not Sirocco brand and have specific technical data. Please refer to that page. All 240V rated fans work equally well on 230V mains.*

FAN ACCESSORIES

Plastic Fan Guard / Filter Kits

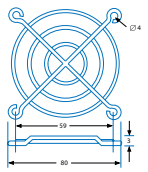
Foam filter prevents dust particles entering the fan. Rated to UL 94V-0.

- We recommend periodic cleaning of the foam filter to prevent clogging and restricting air flow
- Available in 3 sizes

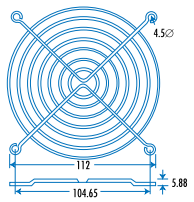
Width	Cat.	Qty 1+	Qty 4+	Qty 10+
60mm	YX2550	$6.95	$6.25	$5.50
80mm	YX2552	$6.95	$6.25	$5.50
120mm	YX2554	$7.95	$6.95	$6.25

Fan Finger Guards

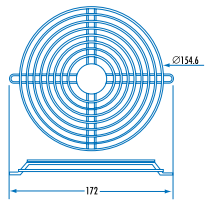
80mm Fans



120mm Fans



150mm Fans



Width	Cat.	Qty 1+	Qty 4+	Qty 10+
80mm	YX2511	$3.95	$3.55	$3.15
120mm	YX2515	$4.95	$4.45	$3.90
150mm	YX2525	$8.95	$7.95	$6.95

12VDC MAGLEV FANS

Super Long-Life Low-Noise MagLev Bearing Case Fans

Featuring a patented Nanoflux bearing that incorporates magnetic levitation (Maglev) technology and precise manufacturing, these premium quality fans ensure an extremely long operational life of 100,000hrs at 40°C (even longer at 25°C). Not only does the unique self-lubricating Maglev bearing design offer extremely long life, but also extremely low noise levels compared to traditional fans ball bearings, and also offers the ability for the fan impeller to be removed for cleaning. The fan impeller itself has a winglet tip design and is UV reactive. Rubber fan mounts are also included to eliminate fan motor vibrations entering the case, further reducing noise levels. Dust/waterproof to IP54, these fans are sure to last even in harsh conditions.

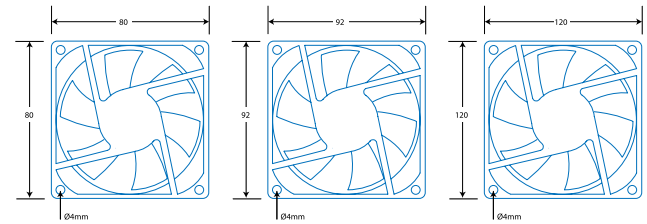
- Voltage: 12VDC (5VDC Starting Voltage)
- Black: Earth, Red: 12V+, Yellow: Tacho output (1 pulse/rev)
- Bearings: Nanoflux magnetic levitation
- Housing: Polycarbonate
- Impellers: UV reactive polycarbonate
- Connections: Flylead - 3 pin molex

5 YEAR WARRANTY

YX2580 YX2582 YX2584

Specifications	YX2580	YX2582	YX2584
Current (mA)	100	180	220
Dimensions (mm)	80 x 80 x 25	92 x 92 x 25	120 x 120 x 25
Air Volume (m^3/min)	0.8	1.13	1.82
Air Volume (CFM)	28.1	39.8	64.3
Speed (RPM)	2000	2000	1500
Noise (dBA)	21	22.5	25

Size	Cat.	Qty 1+	Qty 4+	Qty 10+
80mm	YX2580	$29.95	$26.95	$23.95
92mm	YX2582	$32.95	$28.95	$25.95
120mm	YX2584	$36.95	$32.95	$28.95



12VDC HYDRODYNAMIC FANS

Silent Hydrodynamic Bearing Case Fans

Designed to provide additional airflow without increasing noise levels these fans have precisely balanced blades and long-life hydro-dynamic bearing. Ultra-low noise making these fans are perfect for a home theatre PC, or ventilating the amplifier wedged into your entertainment unit. To further improve silence, rubber fan mounts are included to eliminate fan motor vibrations inducing vibration noise.

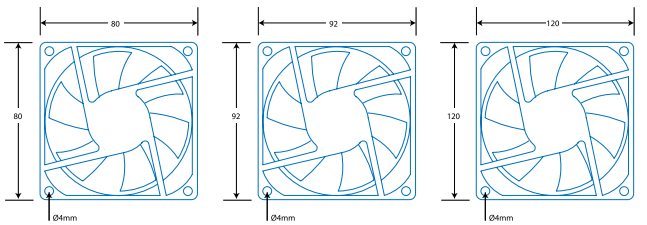
- Voltage: 12VDC
- Rated to last for 50,000 hours at 40°C (more at 25°C)
- Bearings: Ball (hydrodynamic)
- Housing / Impellers: Polycarbonate
- Connections: Flylead - 3 pin molex

1 YEAR WARRANTY

YX2570 YX2572 YX2574

Specifications	YX2570	YX2572	YX2574
Current (mA)	80	130	80
Dimensions (mm)	80 x 80 x 25	92 x 92 x 25	120 x 120 x 25
Air Volume (m^3/min)	0.59	0.89	1.05
Air Volume (CFM)	20.7	31.3	37
Speed (RPM)	1600	1500	1000
Noise (dBA)	18	20	20.2

Size	Cat.	Qty 1+	Qty 4+	Qty 10+
80mm	YX2570	$19.95	$17.70	$15.70
92mm	YX2572	$24.95	$22.35	$19.70
120mm	YX2574	$28.95	$25.95	$22.95



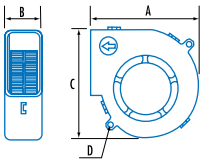
12VDC BLOWER FAN

97mm x 94mm Blower Fan Ball Bearing - 2 Wire

Ideal for applications where space is limited but high air volume is required.

Specifications	YX2532
Voltage (V)	12VDC
Current (mA)	860
Dimensions (mm)	97 x 94 x 33
Air Volume (m^3/min)	0.74
Air Volume (CFM)	26
Speed (RPM)	3600
Noise (dBA)	51
Bearing	Ball Race
Housing & Impeller	Plastic, fibreglass filled
Connections	Flylead

A=97mm
B=33mm
C=94mm



Size	Cat.	Qty 1+	Qty 4+	Qty 10+
97x94mm	YX2532	$34.95	$30.95	$27.95

Where's My Local Jaycar Store?

Use our store finder on our website. With over 300 Jaycar stores and Authorised Resellers, just type in your postcode of area to find the closest one to you.

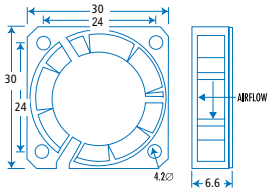
5V/12VDC FANS:

- Housing / Impeller: Plastic GRP Filled
- Connections: Flylead

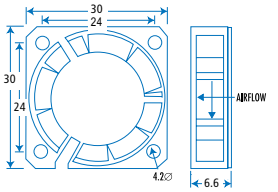
1 YEAR WARRANTY — on all our fans

Sirocco

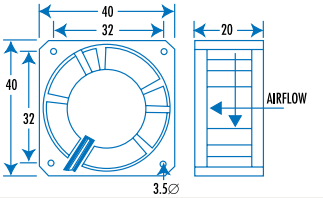
5VDC 30mm Narrow - Ball Bearing 2 Wire



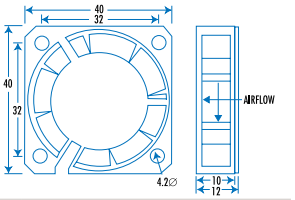
12VDC 30mm Narrow - Ball Bearing 2 Wire



40mm - 2 Wire



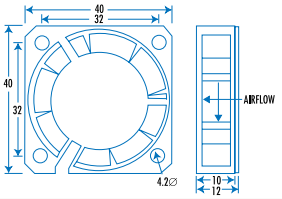
40mm Narrow - 2 Wire



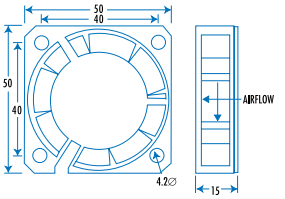
Specifications	YX2500			YX2501			YX2502			YX2503		
Voltage (V)	5VDC			12VDC			12VDC			12VDC		
Current (mA)	120			100			100			80		
Dimensions (mm)	30 x 30 x 6.6			30 x 30 x 6.6			40 x 40 x 20			40 x 40 x 10		
Air Volume (m^3/min)	0.087			0.108			0.215			0.16		
Air Volume (CFM)	3.09			3.09			7.6			5.4		
Speed (RPM)	8000			8000			7000			6000		
Noise (dBA)	21			21			32			30		
Bearing System	Ball Race			Ball Race			Sleeve			Sleeve		
	Qty 1+	Qty 4+	Qty 10+	Qty 1+	Qty 4+	Qty 10+	Qty 1+	Qty 4+	Qty 10+	Qty 1+	Qty 4+	Qty 10+
	$15.95	$13.95	$12.45	$15.95	$13.95	$12.45	$19.95	$17.70	$15.70	$16.95	$14.95	$13.35

1 YEAR WARRANTY — on all our fans

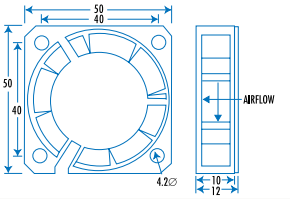
40mm Ball Bearing - 3 Wire



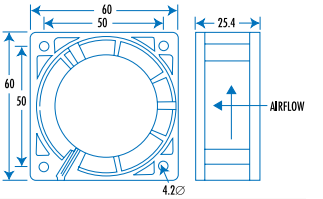
50mm Narrow - 2 Wire



50mm Ball Bearing - 3 Wire



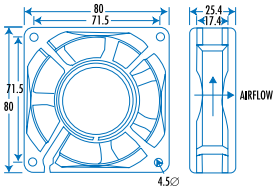
60mm - 2 Wire



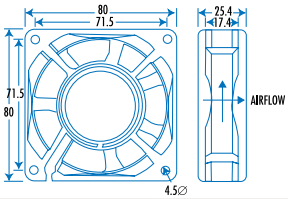
Specifications	XC5054			YX2504			XC5055			YX2505		
Voltage (V)	12VDC			12VDC			12VDC			12VDC		
Current (mA)	80			190			130			130		
Dimensions (mm)	40 x 40 x 10			50 x 50 x 15			50 x 50 x 10			60 x 60 x 25.4		
Air Volume (m^3/min)	0.16			0.7			0.33			0.57		
Air Volume (CFM)	5.4			23.8			11.6			20		
Speed (RPM)	6000			5500			5500			4000		
Noise (dBA)	30			30			31			30		
Bearing System	Ball Race			Sleeve			Ball Race			Sleeve		
	Qty 1+	Qty 4+	Qty 10+	Qty 1+	Qty 4+	Qty 10+	Qty 1+	Qty 4+	Qty 10+	Qty 1+	Qty 4+	Qty 10+
	$15.95	$14.35	$12.75	$17.95	$15.95	$14.35	$15.95	$14.35	$12.75	$17.95	$15.95	$14.35

VENTILATION FANS

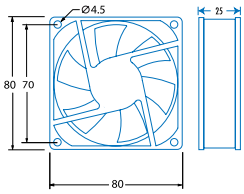
80mm - 2 Wire



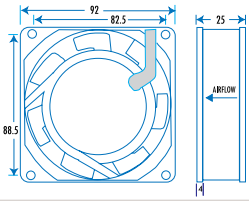
80mm Ball Bearing - 2 Wire



80mm Ball Bearing - IP55

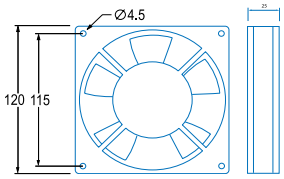


90mm - 2 Wire

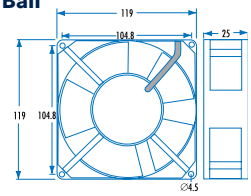


Specifications	YX2512			YX2513			YX2523			YX2521		
Voltage (V)	12VDC			12VDC			12VDC			12VDC		
Current (mA)	200			200			200			320		
Dimensions (mm)	80 x 80 x 25.4			80 x 80 x 25.4			80 x 80 x 25.4			90 x 90 x 25		
Air Volume (m³/min)	0.97			0.97			1.2			1.67		
Air Volume (CFM)	34			34			42			59		
Speed (RPM)	3000			3000			3100			3000		
Noise (dBA)	32			32			35			36		
Bearing System	Sleeve			Ball Race			Ball Race			Sleeve		
	Qty 1+	Qty 4+	Qty 10+	Qty 1+	Qty 4+	Qty 10+	Qty 1+	Qty 4+	Qty 10+	Qty 1+	Qty 4+	Qty 10+
	$17.95	$15.95	$14.35	$19.95	$17.70	$15.70	$29.95	$26.95	$23.95	$19.95	$17.70	$15.70

120mm Ball Bearing - IP55



120mm Narrow Ball Bearing - 2 Wire

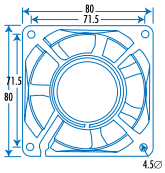


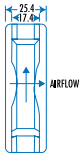
Specifications	YX2522			YX2518		
Voltage (V)	12VDC			12VDC		
Current (mA)	380			360		
Dimensions (mm)	120 x 120 x 25			120 x 120 x 25.4		
Air Volume (m³/min)	3			2.3		
Air Volume (CFM)	88			88		
Speed (RPM)	3000			3000		
Noise (dBA)	45			42		
Bearing System	Ball Race			Ball Race		
	Qty 1+	Qty 4+	Qty 10+	Qty 1+	Qty 4+	Qty 10+
	$39.95	$35.95	$31.95	$28.95	$25.95	$22.95

24VDC FANS

80mm NARROW Ball Bearing Version - 2 Wire

Life expectancy
100,000 hours @ 25°C.





Specifications	YX2542
Voltage (V)	24VDC
Current (mA)	130
Dimensions (mm)	80 x 80 x 25.4
Air Volume (m³/min)	1.1
Air Volume (CFM)	40
Speed (RPM)	3200
Noise (dBA)	35
Bearing	Ball Race
Housing	Plastic, fibreglass filled
Impeller	Plastic, fibreglass filled
Connections	Flylead

Voltage	Size	Cat.	Qty 1+	Qty 4+	Qty 10+
24VDC	80mm	YX2542	$29.95	$26.90	$23.70

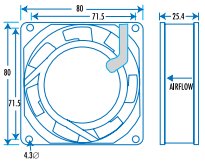
For next day delivery, or Click and Collect, see page A4

VENTILATION FANS

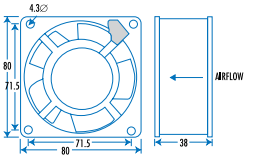
240VAC FANS

- Voltage (V): 240VAC
- Impeller: Plastic, fibreglass filled

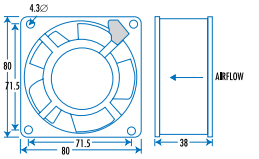
80mm Narrow - 2 Wire



80mm Standard - 2 Wire



80mm Ball Bearing - 2 Wire



Specifications	YX2509			YX2510			YX2508		
Current (mA)	120			80			100		
Dimensions (mm)	80 x 80 x 25.4			80 x 80 x 38			80 x 80 x 38		
Air Volume (m^3/min)	0.67			0.88			0.88		
Air Volume (CFM)	23			30			30		
Speed (RPM)	2800			2800			2800		
Noise (dBA)	33			35			32		
Bearing	Sleeve			Sleeve			Ball		
Housing - Diecast	Diecast zinc, aluminium			Aluminium, powdercoated			Aluminium, powdercoated		
Connections	Flylead			Flylead			Flylead		
Other	-			-			Life - 100,000 hrs@25°C		
	Qty 1+	Qty 4+	Qty 10+	Qty 1+	Qty 4+	Qty 10+	Qty 1+	Qty 4+	Qty 10+
	$29.95	$26.90	$23.70	$29.95	$26.90	$23.70	$39.95	$35.95	$31.95

POWER LEADS

Fan Power Lead

Use with our 240VAC fans with two lugs for power connection. Moulded plug to suit fan one end, and bare wires at the other.

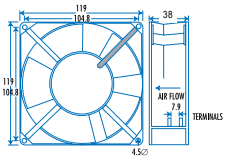
- Length 1.2m
- Suits YX2514, YX2516 & YX2517

Cat.	Qty 1+	Qty 4+	Qty 10+
PS4160	$3.95	$3.45	$3.15

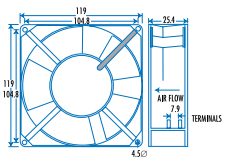
1 YEAR WARRANTY

on all our fans

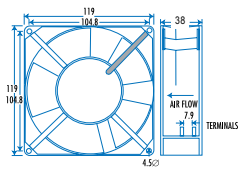
120mm - Solder Lugs



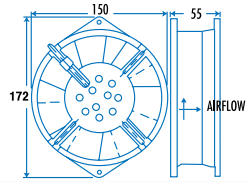
120mm NARROW - Solder Lugs



120mm Ball Bearing - Solder Lugs



150mm Ball Bearing - 2 Wire



Specifications	YX2514			YX2516			YX2517			YX2520		
Current (mA)	125			120			125			290		
Dimensions (mm)	120 x 120 x 38			120 x 120 x 25.4			120 x 120 x 38			150 x 172 x 55		
Air Volume (m^3/min)	3			2.3			3			6.57		
Air Volume (CFM)	105			80			105			230		
Speed (RPM)	3000			2350			3000			3400		
Noise (dBA)	47			44			47			53		
Bearing	Sleeve			Sleeve			Ball Race			Ball Race		
Housing - Diecast	Solder Lugs			Solder Lugs			Solder lugs			Flylead		
Connections	Life - 100,000 hrs@25°C			Life - 100,000 hrs@25°C			Life - 100,000 hrs@25°C			Life - 100,000 hrs@25°C		
Other	-			-						Sleeve		
	Qty 1+	Qty 4+	Qty 10+	Qty 1+	Qty 4+	Qty 10+	Qty 1+	Qty 4+	Qty 10+	Qty 1+	Qty 4+	Qty 10+
	$29.95	$26.95	$23.95	$29.95	$26.90	$23.70	$36.95	$33.45	$29.45	$89.95	$80.95	$71.95

ABS INSTRUMENT CASES WITH PURGE VALVES:

3 YEAR WARRANTY

These robust cases come with purge valves for an airtight seal, ribbed ABS construction, stainless steel hinge pins, O-ring seals and very solid catches. The lids are lined with removable egg-shell foam and they come with pluck foam insert with an extra layer of egg-shell foam. Ideal for your camera gear, test, medical or scientific equipment.

ABS Instrument Case MPV0

Features extremely strong catches with metal pins, it's sealed with a rubber gasket, and inside is pluck foam to shape the internal storage space for a specific object. Lanyard included.
Cat. HB6389

ABS Instrument Case MPV1

Tiny size for small instruments or test equipment.
Cat. HB6388

ABS Instrument Case MPV2

Small size for a single SLR camera, DMM or other test equipment.
Cat. HB6381

ABS Instrument Case MPV4

Medium size to take extra camera and lenses or larger gear such as oscilloscopes or multiple pieces of test equipment.
Cat. HB6383

ABS Instrument Case MPV7

Large size. This case also has moulded slots to take dividers and two layers of pluck foam. It's also deep enough to take a pro SLR camera body.
Cat. HB6385

ABS Instrument Rolling Case MPV8

Ideal for the travelling professional. Like a conventional piece of luggage, it has a retractable handle and built-in wheels to take the load. It's also carry-on size.
Cat. HB6387

	Internal - W x D x H(mm)	External - W x D x H(mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
MPV0	164 x 119 x 40	173 x 125 x 50	HB6389	$24.95	$22.35	$19.70
MPV1	186 x 123 x 75	210 x 135 x 90	HB6388	$39.95	$35.95	$31.95
MPV2	300 x 220 x 90	330 x 280 x 120	HB6381	$69.95	$62.95	$55.95
MPV4	395 x 320 x 117	430 x 380 x 154	HB6383	$99.95	$89.95	$79.95
MPV7	480 x 355 x 186	515 x 415 x 200	HB6385	$129.00	$115.95	$102.95
MPV8	510 x 292 x 175	530 x 355 x 225	HB6387	$189.00	$169.95	$150.95

TOOL & INSTRUMENT CASES

IPX8 Waterproof ABS Cases

Black waterproof ABS cases for storing or transporting just about anything including Smartphones, radios, wallets, delicate electronic devices and more. They are fully protected from water, dust, and sludge thanks to a gasket seal and powerful latches. The insides are lined with a layer of protective foam to insulate against bumps and knocks. Bring one on your next camping trip and keep those valuables protected.

- Lanyard included
- Waterproof & Shockproof

1 YEAR WARRANTY

Size	L(mm)	W(mm)	H(mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
Small	182	120	42	HB6421	$19.95	$17.70	$15.70
Medium	182	120	75	HB6423	$24.95	$22.35	$19.70
Large	210	120	90	HB6425	$34.95	$31.45	$27.90

WATERPROOF ENCLOSURES

IP66 Industrial ABS Enclosures

Gasket seals, stainless steel hardware and IP66 rated for use in industrial, marine and other harsh environments. The closures have a locking catch that engages to positively hold the lid closed until disengaged. Each enclosure includes a 1.8mm galvanised chassis for mounting DIN rail, switchgear, relays or circuit breakers.

1 YEAR WARRANTY

Lid	L(mm)	W(mm)	H(mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
Opaque	200	200	130	HB6404	$39.95	$35.95	$31.95
Transparent	175	125	75	HB6412	$36.95	$32.95	$28.95

ABS PROJECT BOXES

ABS INSTRUMENT CASES

Plastic Instrument Case

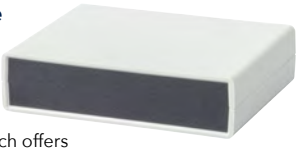
- Modern design case in matt finish surface
- Ideal for desktop instruments
- Top and base is in grey, with dark grey front and rear panels
- Moulded in high impact ABS plastic UL-94-HB
- Includes 4 pcs screws and rubber feet

5 YEAR WARRANTY

LIGHT GREY - DARK GREY END PANELS

W(mm)	D(mm)	H(mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
95	158	47	HB5922	$13.95	$12.45	$10.95

High Impact ABS Instrument Case



This top quality case is ideally suited for instrumentation, telecommunication, or just to make your projects look fabulous

- ABS front and rear panels
- Top and bottom have a tongue and groove joint and are lightly textured which offers a non-scratch surface & keeps the high quality finish
- Slots provided for vertical mounting of PCBs
- Bosses are provided for horizontal mounting of PCBs
- Screws supplied to secure lid to base

5 YEAR WARRANTY

GREY ABS - UL94HB

W(mm)	D(mm)	H(mm)	End panels	Cat.	Qty 1+	Qty 4+	Qty 10+
140	110	35	Black	HB5970	$7.95	$7.15	$6.35

Pro Quality ABS Instrument Cases

Our superb instrument cases will give your projects the professional appearance they deserve. Internal mounting posts enable a wide combination of PCBs, transformers, etc., to be accommodated, PCB guide rails provided internally allow vertical PCB positioning to several locations

- Removable front and rear panels, attractive textured finish one side and plain the other (Enables direct engraving, silk screen printing etc., to plain side)
- Top and bottom split apart for ease of construction or service. Feet included
- Great for test instruments and other high grade projects

5 YEAR WARRANTY

W(mm)	D(mm)	H(mm)		Cat.	Qty 1+	Qty 4+	Qty 10+
200	160	70	Non-vented	HB5912	$17.95	$15.95	$13.95
253	190	82	Vented	HB5910	$27.95	$24.95	$21.95

ABS ENCLOSURES

Jiffy Boxes

Manufactured from ABS plastic, these jiffy boxes not only look great, they have been designed to incorporate everything our customers wanted in a constructor's box. Sizes are compliant with industry standards externally and PCB fitting internally.

- Impervious, dimple-free finish provides good adhesion for screen printing
- Lids feature a 5mm grid of 'centre punch' type points on the underside for quick & accurate drilling
- Lids also feature a 10mm grid of scribed lines providing an easy and precise guide for cutting or filing cut-outs
- PCB guides in the sides of the box have snap-in locators. Eliminates the need for stand-off hardware when mounting boards horizontally
- Box also has a grid of 'centre punch' type points on the base of the inside
- Supplied with lid fixing screws

5 YEAR WARRANTY

		Cat.	Qty 1+	Qty 4+	Qty 10+
UB1	Black	HB6011	$5.25	$4.70	$4.20
UB2	Black	HB6012	$7.95	$7.15	$6.35
UB3	Black	HB6013	$4.50	$4.05	$3.60
UB3	Grey	HB6023	$4.50	$4.05	$3.60
UB5	Black	HB6015	$3.45	$3.10	$2.75
UB5	Grey	HB6025	$3.45	$3.10	$2.75
UB5	Clear	HB6005	$3.45	$3.10	$2.75

BLUE (TRANSLUCENT IMAC® LOOK)

		Cat.	Qty 1+	Qty 4+	Qty 10+
UB5	Blue	HB6004	$3.45	$3.05	$2.75

		To Fit PCB (mm)	
Size	External Dimensions (mm)	Vertical	Horizontal
UB1	158 x 95 x 53	89 x 48	134 x 88
UB2	197 x 113 x 63	105 x 57	172 x 104
UB3	130 x 68 x 44	63 x 39	107 x 62
UB5	83 x 54 x 31	50 x 27	62 x 49

Flanged ABS Lids Version of Jiffy Boxes

These professional enclosures are identical to the UB3 & UB5 jiffy boxes, except they feature flanged lids for bulkhead/surface mounting. The exclusive moulded Jaycar drilling template on the inside of the lid is included, as are the screw hole plugs to hide the lid screws. Ideal for automotive, security, audio/video plus a wide variety of other applications.

- Lid moulded, drill assist pilot holes on a 5 &10mm pitch
- Moulded in ABS plastic
- Exclusive to Jaycar

5 YEAR WARRANTY

		To Fit PCB (mm)	
Size	External Dimensions (mm)	Vertical	Horizontal
UB3	130 x 68 x 44	63 x 39	107 x 62
UB5	83 x 54 x 31	50 x 27	62 x 49

		Cat.	Qty 1+	Qty 4+	Qty 10+
UB5	Black	HB6016	$3.75	$3.35	$3.00
UB3	Black	HB6014	$5.25	$4.70	$4.20
UB3	Grey	HB6024	$5.25	$4.70	$4.20

ABS ENCLOSURES CONTINUED

IP65 Sealed ABS Enclosures

5 YEAR WARRANTY

RoHS COMPLIANT

- Made with ABS material
- Moulded in dark grey
- Operating temperature: -20°C to +80°C
- Bosses on internal base allow fixing of PCBs horizontally, or connection of terminals etc
- The lid and base incorporate a tongue and groove sealing system with a neoprene gasket
- Lid fixing screws are M-4 stainless steel (non-magnetic) into threaded brass inserts
- Wall mounting holes and lid fixing screws are outside the sealing area thus preventing the ingress of moisture and dust
- Some sizes also available with external flange to allow mounting after the box has been sealed
- Designed to IP65 of IEC529 and NEMS 4 (dust and hose proof)
- Internal guide slots for mounting PCB assemblies vertically (Not on HB6120 or HB6134)

W(mm)	D(mm)	H(mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
64	58	35	HB6120	$6.95	$6.25	$5.55
64	58	35 Flange	HB6121	$7.95	$7.15	$6.35
115	65	40	HB6122	$11.95	$10.45	$9.45
115	65	40 Flange	HB6123	$13.95	$12.45	$10.95
115	65	55	HB6124	$13.95	$12.45	$10.95
115	65	55 Flange	HB6138	$15.95	$13.95	$12.45
115	90	55	HB6126	$15.95	$13.95	$12.45
115	90	55 Flange	HB6127	$17.95	$15.95	$13.95
171	121	55 Flange	HB6125	$23.95	$21.45	$18.95
171	121	55	HB6128	$21.95	$19.45	$17.45
171	121	80	HB6129	$23.95	$21.45	$18.95
222	146	55	HB6130	$27.95	$24.95	$21.95
222	146	75	HB6132	$31.95	$27.95	$24.95
240	160	90	HB6134	$39.95	$35.95	$31.95

DIN Rail Enclosure 6U with Clear Lid

This enclosure is made of light-grey ABS and has a clip to attach it to a standard DIN rail. We've found it's the perfect size for an Arduino® Uno or even a Raspberry Pi, and will make a perfect way to protect and mount projects based around Arduino® and Raspberry Pi. Includes a clear lid for a diagnostic display or even some indicator LEDs.

- 6U DIN rail mounting
- Measures 95 x 106 x 58mm incl. clip
- Side knockouts for terminal connections

Colour	Type	Cat.	Qty 1+	Qty 4+	Qty 10+
Grey	DIN 6U	HB6273	$23.95	$21.45	$18.95

ABS Enclosures with Snap-in Hinged Lid

1 YEAR WARRANTY

Versatile ABS plastic enclosures with self-locking construction that provides easy opening and closing of the enclosure without use of additional tools. The rubber cable entry/exit also means you don't need to get the drill out in order to run cabling from the box.

- Four internal moulded standoffs allow you mount a PCB horizontally
- Available in light grey and black colours, and made from high strength ABS plastic
- Full Specifications see website

External dimensions (excluding flange):

HB6431 & HB6433 - 91(L) x 79(W) x 45(H)mm

HB6432 & HB6434 - 91(L) x 122(W) x 69(H)mm

Colour	Type	Cat.	Qty 1+	Qty 4+	Qty 10+
Grey	1-Way Cable Entry	HB6431	$6.95	$6.25	$5.55
Black	1-Way Cable Entry	HB6433	$6.95	$6.25	$5.55
Grey	2-Way Cable Entry	HB6432	$10.95	$9.45	$8.45
Black	2-Way Cable Entry	HB6434	$10.95	$9.45	$8.45

IP54 High Quality Polystyrene Enclosures

This range includes a small flat case that is ideal for remote control transmitters, up to a case that is ideal for bench test equipment, and the best thing is that they are not expensive.

All are supplied with removeable front and rear panels which are light grey in colour, with the rest of the case dark grey. They are moulded in ABS, conform to IP54 and IEC529 and NEMA4 with respect to moisture and dust proof sealing and flame retardant to UL94-VO.

Guide slots are provided for vertical mounting of PCBs, and spacers are moulded in for horizontal mounting.

All but the smallest two have M3 screws and brass inserts to hold top and bottom together.

DARK GREY ABS - FLAME RETARDENT TO UL94

W(mm)	D(mm)	H(mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
90	50	16	HB6030	$5.95	$5.35	$4.75
90	50	24	HB6031	$6.95	$6.25	$5.55
120	60	30	HB6032	$9.95	$8.95	$7.95
150	80	30	HB6034	$15.95	$13.95	$12.45
190	100	40	HB6036	$21.95	$19.45	$17.45

Find Out More In Store

Our staff offer friendly and helpful service. We're here to help.

ABS ENCLOSURES CONTINUED

Bulkhead ABS Mount Cases

5 YEAR WARRANTY

RoHS COMPLIANT

BLACK - HIGH IMPACT ABS

4 cases in the range, all with moulded brackets at each end to mount the case.

- Colour is black

HB6065/68 Have moulded in square cable entries on each end

HB6075 The base snaps into place, and there is a round 10mm dia hole in one side for cable entry.

HB6080 The base mounts with 4 self tapping screws.

HB56065 & HB6068
have side cable entries on each end

W(mm)	D(mm)	H(mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
65	38	27	HB6065	$3.25	$2.90	$2.60
72	44	28	HB6068	$3.45	$3.10	$2.75
88	69	33	HB6075	$4.75	$4.25	$3.80
112	67	36	HB6080	$6.75	$6.05	$5.40

EXTRA DEEP BULKHEAD ABS MOUNT CASE

The base mounts to case with 4 self tapping screws included.

W(mm)	D(mm)	H(mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
72	50	63	HB6081	$7.95	$7.15	$6.35

BULKHEAD MOUNT CASE WITH CLEAR FRONT / TOP

This case has mounting brackets at each end that are easily removeable if you do not wish to mount the case. It has a clear plastic front/top plate that allows you to view the contents of the box. This plate is screwed on from the base/back and cannot easily be removed from the front.

- Colour: Black and Clear

W(mm)	D(mm)	H(mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
120	70	30	HB6082	$14.95	$13.45	$11.95

40YRS OF OF ENCLOSURES

Snap Fit ABS Enclosures - Black

1 YEAR WARRANTY

A range of black ABS enclosures with side flanges allowing wall, or even ceiling mount. Snap fit design locks together to enclose your circuit board or project inside.

- Material: ABS
- Colour: Black
- Wall mount holes: 2 x 4.5mm Dia
- Internal holes: 4 x 2.6mm x 6mm

Cat.	Dimensions (Internal)	Dimensions (External)
HB6006	45.44(W) x 45.84(D) x 18.0(H)mm	70.4(W) x 50.5(D) x 27.0(H)mm
HB6007	65.44(W) x 45.84(D) x 33.0(H)mm	90.4(W) x 50.5(D) x 42.0(H)mm
HB6008	75.44(W) x 76.04(D) x 33.5(H)mm	100.6(W) x 80.7(D) x 43.5(H)mm
HB6009	100.44(W) x 66.04(D) x 41.1(H)mm	127.0(W) x 70.7(D) x 50.5(H)mm

W(mm)	D(mm)	H(mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
70.4	50.5	27.0	HB6006	$4.95	$4.45	$3.95
90.4	50.5	42.0	HB6007	$5.95	$5.35	$4.75
100.6	80.7	43.5	HB6008	$6.95	$6.25	$5.55
127.0	70.7	50.5	HB6009	$7.45	$6.70	$5.95

Enclosure Potting Box

5 YEAR WARRANTY

RoHS COMPLIANT

- Protect your electronic assemblies against shock, temperature, humidity and chemicals
- Moulded in high impact ABS plastic
- Black in colour
- Flammability rating: UL-94HB

W(mm)	D(mm)	H(mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
39	39	27	HB5202	$1.50	$1.35	$1.20
45	30	25	HB5200	$1.00	$0.90	$0.80
70	50	20	HB5204	$2.95	$2.60	$2.30

Grey Vented ABS Enclosures

A range of vented ABS enclosures to protect your project from unwanted fingers or objects making contact with your electronics, but still allowing for airflow (or moisture for environment sensor applications). The enclosures are moulded from grey ABS plastic and have a satin textured finish. Four moulded standoffs hold your circuit board in place (screws not included - use #2 x 3/16" or similar), and slots in the base makes it easy to wall-mount the enclosure. Wiring can be easily passed through by knocking out a small round section in its base with a screwdriver. The snap-fit assembly makes it easy to close or open the enclosure without the need for tools.

- ABS plastic with UL94-HB rating
- Satin texture finish
- Designed to meet IP30
- Grey in colour

	Cat.	Qty 1+	Qty 4+	Qty 10+
40 x 40 x 20mm	HB6114	$3.95	$3.55	$3.15
60 x 60 x 20mm	HB6116	$5.45	$4.90	$4.35
80 x 80 x 20mm	HB6118	$5.95	$5.35	$4.75

SPECIALTY PLASTIC ENCLOSURES

Sealed Polycarbonate Enclosures - IP65

- Made with Polycarbonate material - moulded in light grey
- Operating temperature: -40°C to +125°C
- The lid and base incorporate a tongue and groove sealing system with a neoprene gasket
- Lid fixing screws are M-4 stainless steel (non-magnetic) into threaded brass inserts
- Wall mounting holes and lid fixing screws are outside the sealing area thus preventing the ingress of moisture and dust
- Designed to IP65 of IEC 529 and NEMA 4 (dust and hose proof)
- Internal guide slots for mounting PCB assemblies vertically (not on HB6230)

5 YEAR WARRANTY

RoHS COMPLIANT

LIGHT GREY

W (mm)	D (mm)	H(mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
82	80	55	HB6230	$14.95	$13.45	$11.95
115	65	40	HB6212	$14.95	$13.45	$11.95
115	90	55	HB6216	$17.95	$15.95	$13.95
171	121	55	HB6218	$24.95	$22.45	$19.95
171	121	80	HB6224	$26.95	$23.95	$21.45
222	146	55	HB6220	$34.95	$30.95	$27.95

LIGHT GREY WITH CLEAR LID

W (mm)	D (mm)	H (mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
171	121	55	HB6248	$24.95	$22.45	$19.95

LIGHT GREY WITH MOUNTING FLANGE

W (mm)	D (mm)	H(mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
64	58	35	HB6211	$12.95	$11.45	$9.95
115	65	40	HB6213	$16.95	$14.95	$13.45
115	90	55	HB6217	$19.95	$17.95	$15.95
171	121	55	HB6219	$26.95	$23.95	$21.45
171	121	80	HB6221	$29.95	$26.95	$23.95

LIGHT GREY WITH CLEAR LID WITH MOUNTING FLANGE

W (mm)	D (mm)	H (mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
115	65	40	HB6249	$16.95	$14.95	$13.45
115	90	55	HB6251	$19.95	$17.95	$15.95
115	121	80	HB6223	$29.95	$26.95	$23.95

Remote Control Case

This case is ideal for a TV remote control. The case includes a battery compartment with sliding cover. It will accept either 2 x AA batteries or a 9V. The terminals for the AA batteries are included. The transmitting end of the box is supplied with 2 plastic panels, one the colour of the box, the other a red perspex for use with Infrared LEDs.

- Includes Battery Contact Kit & Translucent Panel

RoHS COMPLIANT

5 YEAR WARRANTY

BLACK - HIGH IMPACT ABS UL94VO

W(mm)	D(mm)	H(mm)	Flame REtard	Cat.	Qty 1+	Qty 10+	Qty 20+
135	70	24	No	HB5610	$9.95	$8.75	$7.75

Keyfob Remote Control Case

Includes the case and hardware, which consists of pushbutton knobs, battery terminals, LED cover and keyring.

W(mm)	D(mm)	H(mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
32	50	10	HB5605	$3.95	$3.55	$3.15

METAL INSTRUMENT CASES

Metal Enclosures

Aluminium cases finished in grey with black finish steel cover. Ventilated and supplied with rubber feet.

p.B251 range of rack mount enclosures

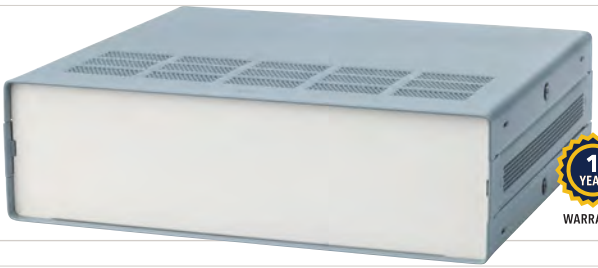
5 YEAR WARRANTY

W(mm)	D(mm)	H(mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
102	150	61	HB5442	$17.95	$15.95	$13.95
160	184	70	HB5446	$23.95	$21.45	$18.95

Professional Bench Enclosure

This cabinet has pre-punched ventilation holes, metal thread fastening screws, aluminium prepainted front and rear panels, up to the minute styling and facilities to mount internal hardware without recourse to drilling lids. Apart from this, the enclosure features cabinet heights that comply with standard IEC297 rack heights. Even though it is not a rack cabinet many components (especially transformers) are made to comply to these height dimensions.

- Grey in colour



1 YEAR WARRANTY

W(mm)	D(mm)	H(mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
304	279	88	HB5556	$79.95	$71.95	$63.95

METAL ENCLOSURES - DIECAST

IP65 Sealed Diecast Aluminium Boxes

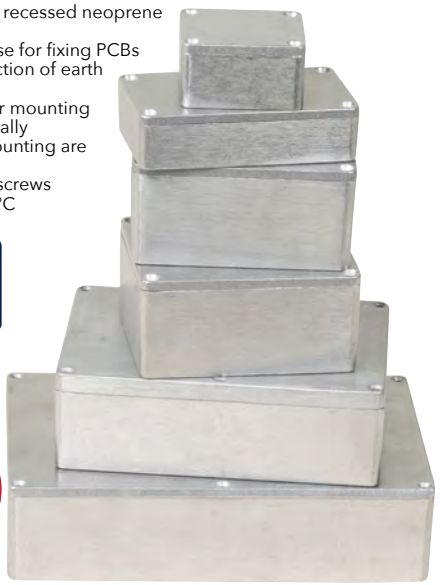
This range of boxes compare in quality to those English and Canadian ones that are VERY expensive. These are ideal for housing electronic assemblies, pneumatic, hydraulic & electrical devices for commercial & industrial environments. Provides effective shielding of EMI and RFI.

- Aluminium diecast - resistant to atmospheric and marine corrosion
- Designed to IP65 of IEC529 and NEMA4 (dust and hoseproof)
- Wall mounting holes and lid fixing screws are outside the sealing area
- The lid incorporates a recessed neoprene gasket
- Bosses on internal base for fixing PCBs horizontally or connection of earth grounding, etc
- Internal guide slots for mounting PCB assemblies vertically
- Screw holes for lid mounting are roll threaded
- Captive, recessed lid screws
- Heat rating up to 400°C

5 YEAR WARRANTY

RoHS COMPLIANT

Manufacturers and bulk users - contact Jaycar for bulk pricing.



p.A216 range of knobs

Specifications	All Models
Wall Thickness	3.4 +/-0.1mm
Box And Lid	Aluminium alloy ADC-10 to Japan Industrial Standard (JIS) in natural state
Gasket	Neoprene, resistant to oil and petrol
Lid Screws	M4 stainless steel (non magnetic)
Ground Screw And Washer, Copper Plated.	

W(mm)	D(mm)	H(mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
64	58	35	HB5030	$13.95	$12.45	$10.95
115	65	30	HB5036	$17.95	$15.95	$13.95
115	65	55	HB5040	$21.95	$19.45	$17.45
115	90	55	HB5042	$25.95	$22.95	$20.45
171	121	55	HB5046	$36.95	$32.95	$28.95
222	146	55	HB5050	$39.95	$35.95	$31.95

Economy Diecast Aluminium Boxes

- Excellent screening properties for EMI and RFI
- Ideal for projects subject to weather
- Made from 380 Die-cast aluminium alloy (BS1490 LM24)
- Close fitting flanged lids
- Ideal for instruments, meter cases, filter networks etc
- Robust, light weight and easy to machine
- Ideal for projects involving heat as the case itself makes an excellent heatsink

5 YEAR WARRANTY

RoHS COMPLIANT

W (mm)	D (mm)	H (mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
51	51	32	HB5060	$10.95	$9.45	$8.45
111	60	30	HB5062	$13.95	$12.45	$10.95
111	60	54	HB5063	$16.95	$14.95	$13.45
119	94	34	HB5067	$17.95	$15.95	$13.95
119	94	57	HB5064	$22.95	$20.45	$17.95

IP65 Sealed Diecast Aluminium Boxes - Flanged Mount

1 YEAR WARRANTY

Sealed aluminium enclosures for external use are provided with flanges and holes for wall mounting. Lid fixing bolts are located outside the sealing area to ensure better sealing. Made from aluminium alloy ADC-10 (JIS) and provides protection against dust and moisture (IP65). Features racks and guides for mounting a PCB horizontally or vertically.

W(mm)	D(mm)	H(mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
90	36	30	HB5029	$14.95	$13.45	$11.95
64	58	35	HB5031	$15.95	$13.95	$12.45
115	90	55	HB5044	$27.95	$24.95	$21.95
171	121	55	HB5041	$39.95	$35.95	$31.95

METAL ENCLOSURES - ALUMINIUM

Aluminium Enclosure with Clear Ends

This great looking enclosure is sturdy and sleek. The extruded aluminium construction is ideal for both strength and heat-sinking if necessary. Provided with clear end caps to allow hole-less mounting of displays and diagnostic LEDs.

- Measures 115mm x 51mm x 119mm
- Slots for easy PCB mounting
- Clear end caps
- Sealing gaskets

Cat.	Qty 1+	Qty 4+	Qty 10+
HB6294	$37.95	$33.95	$29.95

Blue Aluminium Enclosure with Clear Ends

This great looking enclosure is sturdy and sleek. The extruded aluminium construction is ideal for both strength and heat-sinking if necessary. Provided with clear end caps to allow hole-less mounting of displays and diagnostic LEDs.

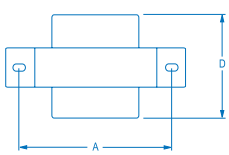
- Measures 177mm x 61mm x 89mm
- Slots for easy PCB mounting
- Clear end caps
- Sealing gaskets

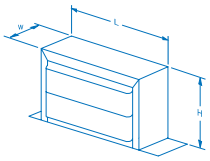
Cat.	Qty 1+	Qty 4+	Qty 10+
HB6296	$48.95	$43.95	$38.95

pick me QUICK REFERENCE TRANSFORMER SELECTION

Magnetic core technology for mains transformers has been stable for many years. This is not to say that manufacturing technology has not improved. Our range of transformers may be stable, but that does not mean that our products don't change. We are constantly refining these transformers. We have two major categories Power EI Core and Power Toroidals. This table gives an overview with key technical Specifications for easy reference and selection.

- Primary Voltage (V): 240VAC
- Primary internal thermal fuse protection
- Conforms to AS/NZ 61558.2.6





Power EI Core

			Secondary				Connection		Dimensions (mm)						
	Type	VA	Voltage (V)	Current (A)	Winding	Regulation (%)	Primary	Secondary	a	d	l	w	h	(kg)	Page
MM2017	2840	1.35	9, 4.5	150mA	Centre Tapped	9	Fly Leads	Fly Leads	45	32	37	16	32	0.120	A184
MM2018	2854	3.6	24, 12	150mA	Centre Tapped	12	Fly Leads	Fly Leads	53	41	43	22	36	0.230	A184
MM2006	2851	1.9	12.6, 6.3	150mA	Centre Tapped	8	Fly Leads	Fly Leads	46	32	37	16	32	0.112	A184
MM2007	2855	4.5	30, 15	150mA	Centre Tapped	8	Fly Leads	Fly Leads	53	44	43	28	36	0.280	A184
MM2013	2853	7	12.6, 6.3	500mA	Centre Tapped	10	Fly Leads	Fly Leads	61	38	51	20	43	0.310	A184
MM2002	2155	15	15, 12.6, 9.5, 8.5, 7.5, 6.3	1A	Multi-Tapped	10	Fly Leads	Solder Lugs	72	52	59	32	51	0.665	A184
MM2008	6672	30	30, 27.5, 24, 20, 17.5, 15	1A	Multi-Tapped	11	Fly Leads	Solder Lugs	85	62	69	35	59	0.924	A184
MM2005	2165	60	30, 24, 21, 18, 15, 12, 9	2A	Multi-Tapped	8	Fly Leads	Solder Lugs	85	65	69	35	59	0.995	A184
MM2011	2154	18	18, 15, 12	1A	Multi-Tapped	8	Fly Leads	Solder Lugs	72	56	59	32	51	0.650	A184
MM2014	2167L	60	(12, 9) (x2)	2.5A (x2)	Multi-Tapped/Dual	10	Fly Leads	Solder Lugs	82	76	69	48	59	1.30	A184
MM2004	2156	30	15, 12, 9, 6	2A	Multi-Tapped	10	Fly Leads	Solder Lugs	82	60	69	35	59	0.92	A185
MM2012	2158	72	24	3A	Single	9	Fly Leads	Fly Leads	82	76	69	48	59	1.30	A185
MM2015	2170	100	(15, 12) (x2)	3A (x2)	Multi-Tapped/Dual	7	Fly Leads	Solder Lugs	91	76	80	44	68	1.60	A185

Note 1: All EI Core Transformer Fly Leads 200mm

Note 2: The dual winding models can be connected in parallel to obtain twice the output current. The windings must be connected in phase.

Power Toroidals

		Secondary				Connection		Dimensions (mm)				
	VA	Voltage (V)	Current (A)	Winding	Regulation (%)	Primary	Secondary	OD	ID	H	(kg)	Page
MT2082	20	9 (x2)	1.11A (x2)	Dual	14	Fly Leads	Fly Leads	75	27	32	0.51	A183
MT2084	20	12 (x2)	0.83A (x2)	Dual	14	Fly Leads	Fly Leads	75	27	32	0.51	A183
MT2086	20	15 (x2)	0.66A (x2)	Dual	15	Fly Leads	Fly Leads	75	27	32	0.51	A183
MT2112	160	12 (x2)	6.66A (x2)	Dual	10	Fly Leads	Fly Leads	110	34	44	1.80	A183

Note 1: All Toroidal Transformer Fly Leads 150mm.

Note 2: The secondary windings can be connected in parallel to obtain twice the output current. The windings must be connected in phase.

TOROIDALS: WHY A TOROID?

SOANAR

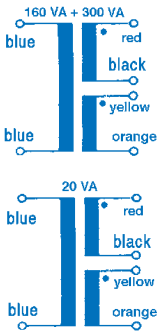
- Smaller size and weight to meet modern 'slimline' requirements
- Low electrically induced noise demanded by compact equipment
- High efficiency enabling conservative rating whilst maintaining size advantages
- Simple, quick, single bolt mounting

The Toroidal transformer is now accepted as the standard in the industry, quality made to ISO 9000 overtaking the obsolete laminated type. Industry has been quick to recognise the advantage toroidals offer in size, weight and lower radiated field. Current ratings on toroidal transformers. Can be used in 2 ways:

A) Both secondary windings in series - double the volts

B) Both secondary windings in parallel - double the amps.

Note: If connected in parallel, the windings must be connected in phase.



20VA LOW PROFILE: MT2082 / MT2084 / MT2086

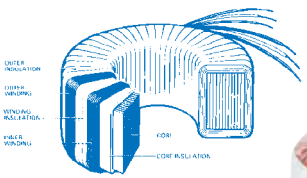
- Dimensions: 75(O/D) x 27(I/D) x 32(H)mm

The height is only 32mm, which means they will fit into a 44mm rack case.

160VA TOROID: MT2112

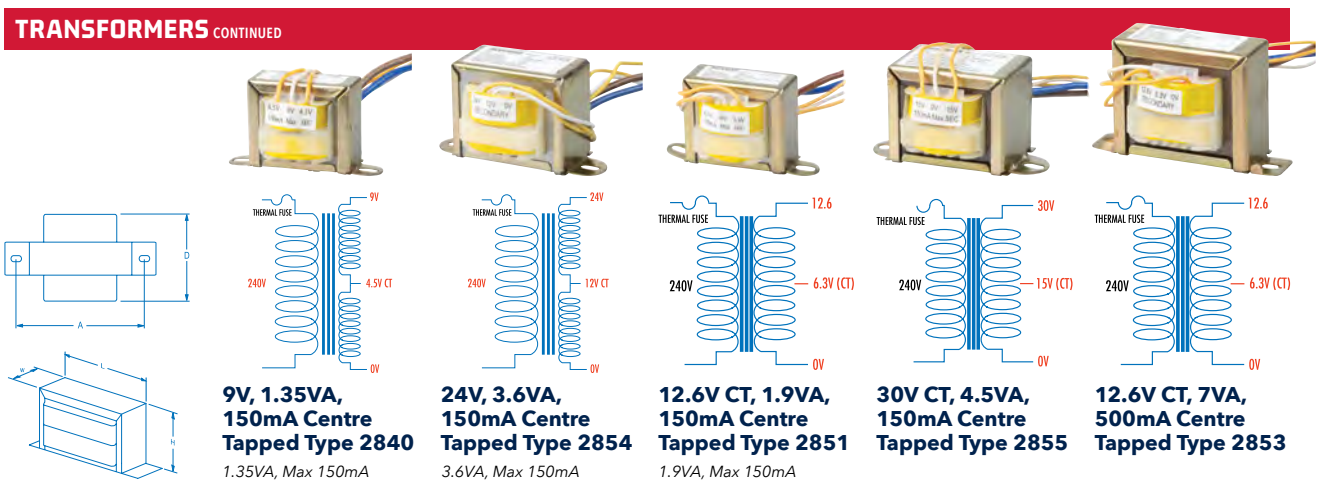
- Dimensions: 110(O/D) x 34(I/D) x 44(H)mm

Cat.		Secondary Series	Secondary Parallel
MT2082	9+9V	1.11A	2.22A
MT2084	12+12V	0.833A	1.66A
MT2086	15+15V	0.666A	1.333A
MT2112	12+12V	6.66A	13.33A



	Cat.	Qty 1+	Qty 2+	Qty 4+
9V 20VA	MT2082	$29.95	$26.95	$23.95
12V 20VA	MT2084	$29.95	$26.95	$23.95
15V 20VA	MT2086	$29.95	$26.95	$23.95
12V 160VA	MT2112	$69.95	$62.95	$55.95

TRANSFORMERS CONTINUED



9V, 1.35VA, 150mA Centre Tapped Type 2840

1.35VA, Max 150mA

24V, 3.6VA, 150mA Centre Tapped Type 2854

3.6VA, Max 150mA

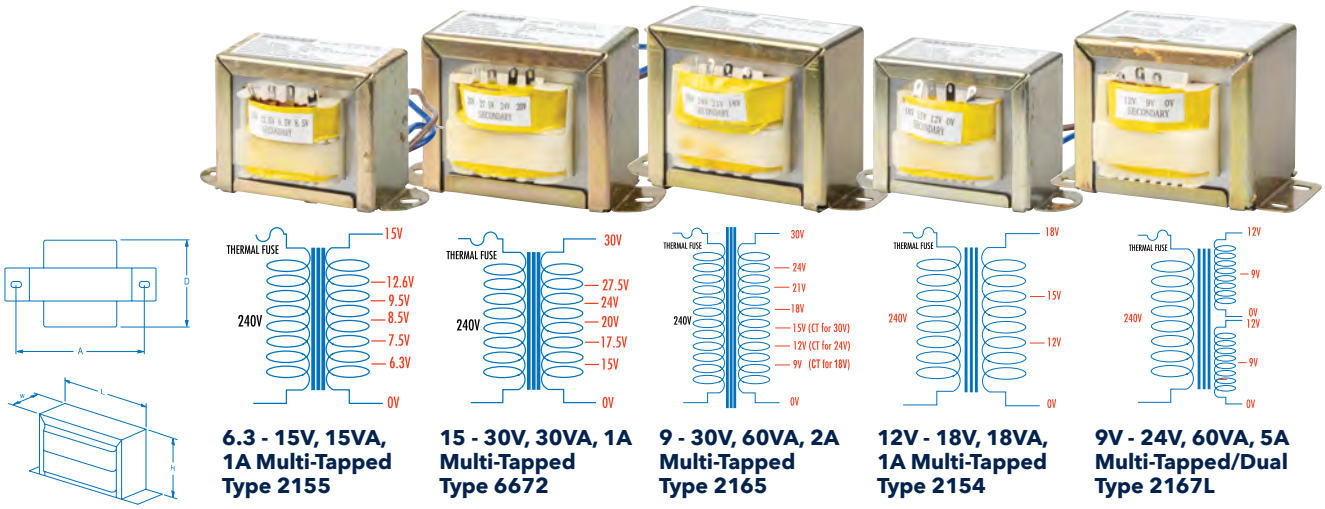
12.6V CT, 1.9VA, 150mA Centre Tapped Type 2851

1.9VA, Max 150mA

30V CT, 4.5VA, 150mA Centre Tapped Type 2855

12.6V CT, 7VA, 500mA Centre Tapped Type 2853

Specifications	MM2017			MM2018			MM2006			MM2007			MM2013		
Type	2840			2854			2851			2855			2853		
Secondary winding (s)	Centre Tapped			Centre Tapped			Centre Tapped			Centre Tapped			Centre Tapped		
Total VA rating	1.35VA			3.6VA			1.9VA			4.5VA			7VA		
Secondary Voltages	9V, 4.5V (CT)			24V, 12V (CT)			12.6V, 6.3V(CT)			30V, 15V(CT)			12.6V, 6.3V(CT)		
Secondary Current (max)	150mA			150mA			150mA			150mA			500mA		
Magnetising Current	30mA			40mA			15mA			40mA			40mA		
Temp rise above ambient at rated power	60°C			65°C			40°C			40°C			40°C		
Regulation	9%			12%			8%			8%			10%		
Weight	120g			230g			112g			280g			310g		
Secondary Connection	200mm Fly leads			200mm Fly leads			200mm Fly leads			200mm Fly leads			200mm Fly leads		
Dimensions (mm)	A45, D32, L37, W16, H32			A53, D41, L43, W22, H36			A46, D32, L37, W16, H32			A53, D44, L43, W28, H36			A61, D38, L51, W20, H43		
	Qty 1+	Qty 2+	Qty 4+	Qty 1+	Qty 2+	Qty 4+	Qty 1+	Qty 2+	Qty 4+	Qty 1+	Qty 2+	Qty 4+	Qty 1+	Qty 2+	Qty 4+
	$8.50	$7.65	$6.80	$9.50	$8.55	$7.60	$8.50	$7.65	$6.80	$9.95	$8.95	$7.95	$10.50	$9.00	$8.00



6.3 - 15V, 15VA, 1A Multi-Tapped Type 2155

15 - 30V, 30VA, 1A Multi-Tapped Type 6672

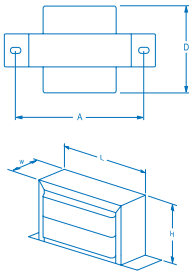
9 - 30V, 60VA, 2A Multi-Tapped Type 2165

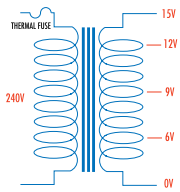
12V - 18V, 18VA, 1A Multi-Tapped Type 2154

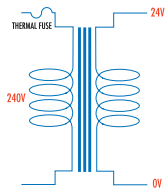
9V - 24V, 60VA, 5A Multi-Tapped/Dual Type 2167L

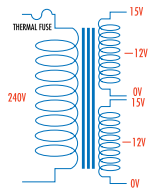
Specifications	MM2002			MM2008			MM2005			MM2011			MM2014		
Type	2155			6672			2165			2154			2167L		
Secondary winding (s)	Multi-Tapped			Multi-Tapped			Multi-Tapped			Multi-Tapped			Multi-Tapped/dual		
Total VA rating	15VA			30VA			60VA			18VA			60VA		
Secondary Voltages	15V, 12.6V, 9.5V, 8.5V, 7.5V(CT), 6.3V(CT)			30V, 27.5V, 24V, 20V, 17.5V, 15V(CT)			30V, 24V, 21V, 18V, 15V(CT), 12V(CT), 9V(CT)			18V, 15V, 12V			12V, 9V (x2)		
Secondary Current (max)	1A			1A			2A			1A			2.5A (x2)		
Magnetising Current	30mA			40mA			60mA			40mA			65mA		
Temp rise above ambient at rated power	45°C			60°C			60°C			60°C			65°C		
Regulation	10%			11%			8%			8%			10%		
Weight	665g			924g			955g			650g			1300g		
Secondary Connection	Solder lugs			Solder lugs			Solder lugs			Solder lugs			Solder lugs		
Dimensions (mm)	A72, D52, L59, W32, H51			A85, D62, L69, W35, H59			A85, D65, L69, W35, H59			A72, D56, L59, W32, H51			A82, D76, L69, W48, H59		
	Qty 1+	Qty 2+	Qty 4+	Qty 1+	Qty 2+	Qty 4+	Qty 1+	Qty 2+	Qty 4+	Qty 1+	Qty 2+	Qty 4+	Qty 1+	Qty 2+	Qty 4+
	$12.50	$11.00	$10.00	$19.95	$17.95	$15.95	$29.95	$26.95	$23.95	$12.50	$11.00	$10.00	$29.95	$26.95	$23.95

TRANSFORMERS CONTINUED









6 - 15V, 30VA, 2A Multi-Tapped Type 2156

24V, 72VA, 3A Single Winding Type 2158

12V - 30V, 100VA, 6A Multi-Tapped/ Dual Type 2170

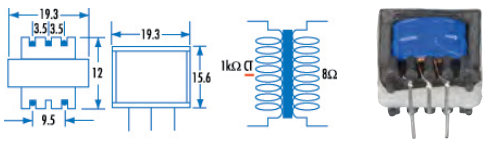
Specifications	MM2004			MM2012			MM2015		
Type	2156			2158			2170		
Secondary winding (s)	Multi-Tapped			Single			Multi-Tapped/dual		
Total VA rating	30VA			72VA			100VA		
Secondary Voltages	15V, 12V, 9V, 6V(CT)			24V			15V, 12V(x2)		
Secondary Current (max)	2A			3A			3A (x2)		
Magnetising Current	60mA			60mA			80mA		
Temp rise above ambient at rated power	60°C			65°C			70°C		
Regulation	10%			10%			7%		
Weight	920g			1300g			1600g		
Secondary Connection	Solder lugs			200mm Fly leads			Solder lugs		
Dimensions (mm)	A82, D60, L69, W35, H59			A82, D76, L69, W48, H59			A91, D76, L80, W44, H68		
	Qty 1+	Qty 2+	Qty 4+	Qty 1+	Qty 2+	Qty 4+	Qty 1+	Qty 2+	Qty 4+
	$19.95	$17.95	$15.95	$29.95	$26.95	$23.95	$33.95	$29.95	$26.95

MINIATURE TRANSFORMERS

Miniature Transformer

STANDARD

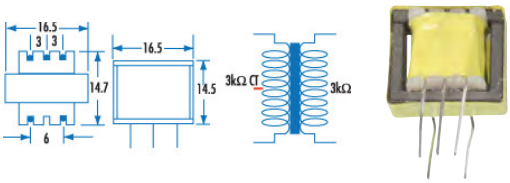
- Primary/secondary 1k Ω ct/8 Ω
- 350mW rating



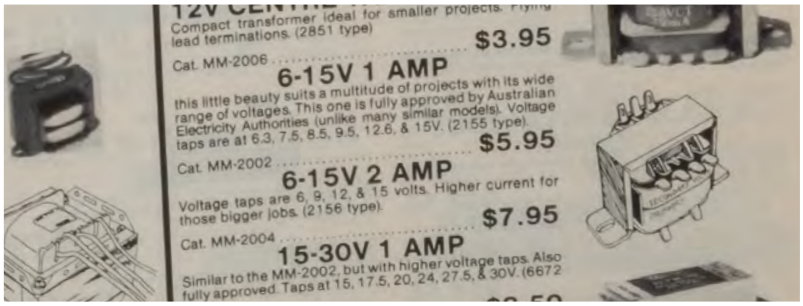
	Cat.	Qty 1+	Qty 2+	Qty 4+
Standard	MM2532	$5.25	$4.70	$4.20

Miniature Coupling Transformer

- 3k Ω CT//3k
- Iron core



	Cat.	Qty 1+	Qty 2+	Qty 4+
Miniature	MM2534	$5.25	$4.70	$4.20

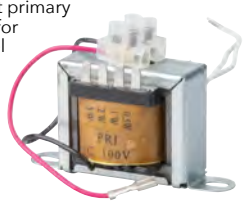


40YRS OF TRANSFORMERS

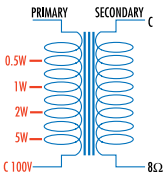
SPEAKER TRANSFORMER

5W Line Speaker Transformer

Designed to tap 100V (or 70V 1/2 power) public address amplifier lines to use an 8Ω speaker. Made with grain oriented steel for good frequency response. Good dynamic range. Primary taps enable you to select power level for 8Ω speaker. Connect primary to C (100V) and tap for whatever sound level is required from 0.5-5WRMS. Supplied with terminal block mounted on top of transformer. Mounting hole centres 53mm.



Primary	Power
20k	0.5W
10k	1W
5k	2W
2.5k	5W



Cat.	Qty 1+	Qty 2+	Qty 4+
MM1900	$10.95	$9.75	$8.75

STROBE GLOBE & TRIGGER

Miniature Strobe Trigger Transformer

Used to trigger small XENON discharge lamps.

- Can be used with SL2692 Strobe Tube
- Dimensions: 10(L) x 7(Ø)mm

Cat.	Qty 1+	Qty 10+	Qty 25+
MM2520	$1.95	$1.75	$1.55

XENON Replacement Globe

Suits common party strobe lights with a Xenon tube. Can be used with MM2520 Trigger Transformer.

- Design power: 6W
- Max voltage: 550V
- Design voltage: 500V
- Min voltage: 200V
- Min trigger voltage: 210V
- Flash frequency: 0.4 - 4Hz
- Sec trigger voltage: 6kV
- Lifespan: Up to 3 million flashes
- Glass dimensions: 32(H) x 5(Dia.)mm

Cat.	Qty 1+	Qty 10+	Qty 25+
SL2692	$5.95	$5.35	$4.75

BOOKS

Build Your Own Coils and Transformers Book

This book is a wealth of information, ideal for a hobbyist or anybody interested in winding their own transformers. After the introduction the book covers attributes of coils/transformers, mutual inductance, reactance, resonance, impedance, coil selectivity. It then goes on to the design aspects - discussing coils in tuning circuits, types of formers and cores, types of winding, self capacity, equations, coil design, design of IF transformers then output and power transformers. 55 pages 137 x 212mm.

Cat.	Qty 1+
BM2440	$7.95

COMPONENTS

ACTIVE COMPONENTS:

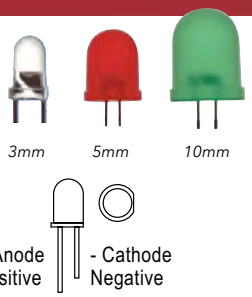
Integrated Circuits (ICs)	A194
Light Emitting Diodes (LEDs)	A187
Transducers	A205
Transistors & Diodes	A200
Voltage Regulators	A203

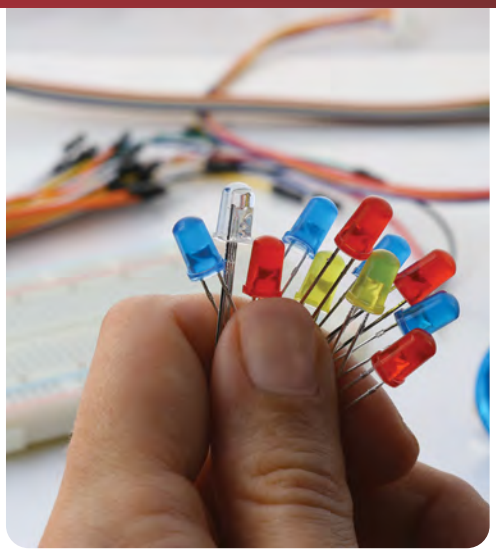
PASSIVE COMPONENTS:

Capacitors	A206
EMC / RFI Suppression	A210
Ferrites	A210
Potentiometers & Knobs	A215
Resistors	A213

LIGHT EMITTING DIODES

- Luminous intensity (IV) does not represent total light output from an LED. Both the luminous intensity & the spatial radiation pattern (viewing angle) must be taken into account
- If two LEDs have the same luminous intensity value, the lamp with the larger viewing angle will have the higher total light output
- Maximum luminous intensity can be achieved by operating the LED in pulsed mode, or maximum continuous forward current





Viewing Angle	Is the complete angle where the luminous intensity is half the on-axis intensity.
Wavelength	Dominant Wavelength of the light emitted in nm (nanometers). This determines the colour of the LED.
IF Typical	Continuous forward current in mA to obtain typical optical characteristics.
VF Typical	Continuous forward voltage in Volts to obtain typical optical characteristics.
IF Max	Maximum continuous forward current in mA at 25°C.
VDD Typical	Operating voltage to obtain typical optical characteristics.
VDD Max	Absolute maximum supply voltage at 25°C.
IV Typical	Light emitted from the LED is quantified by a single point, ie the on-axis luminous intensity value in mcd (millicandela) at IF Typical.

Flashing LEDs

OPTICAL & ELECTRONIC CHARACTERISTICS

	Size (mm)	Viewing Angle	Colour	Lens	Wavelength, Chromatic Co-ord.	IF Typical	VDD Typical	IV Typical	Absolute max VDD Max	Cat.	Qty 1+	Qty 10+	Qty 25+
Flashing	5	50°	Red	Diffused	630nm	20mA	5.0V	50mcd	10mA	ZD0240	$0.95	$0.57	$0.47
Flashing	5	30°	Red	Diffused	643nm	20mA	5.0V	60mcd	10mA	ZD1785	$1.25	$1.10	$0.85
Flashing	5	45°	Yellow	Diffused	597nm	20mA	5.0V	35mcd	10mA	ZD0244	$0.95	$0.57	$0.47
Flashing	5	45°	Green	Diffused	568nm	20mA	5.0V	35mcd	10mA	ZD0242	$0.95	$0.57	$0.47
Flashing	5	40°	Blue	Diffused	470nm	20mA	5.0V	900mcd	10mA	ZD0245	$1.45	$0.85	$0.70
Flashing	10	50°	Red	Diffused	660nm	20mA	5.0V	50mcd	10mA	ZD1965	$1.25	$1.10	$0.85

Tri Colour Sequencing LEDs

OPTICAL & ELECTRONIC CHARACTERISTICS

	Size (mm)	Viewing Angle	Colour	Lens	Wavelength, Chromatic Co-ord.	IF Typical	VDD Typical	IV Typical	Absolute max VDD Max	Cat.	Qty 1+	Qty 10+	Qty 25+
Tri Colour Sequencing	5	30°	Red	Waterclear	625nm	20mA	4.5V	500mcd	4.5mA	ZD0247	$1.95	$1.75	$1.35
		30°	Green	Waterclear	520nm	20mA	4.5V	5000mcd	4.5mA				
		30°	Blue	Waterclear	470nm	20mA	4.5V	2000mcd	4.5mA				
Tri Colour Sequencing	5	25°	Red	Waterclear	620nm	30mA	3.2V	2000mcd	100mA	ZD0269	$3.50	$2.10	$1.75
		20°	Green	Waterclear	520nm	30mA	2V	3500mcd	100mA				
		20°	Blue	Waterclear	470nm	30mA	2V	5000mcd	100mA				

STANDARD LEDS

3mm LEDs

Size	Viewing Angle	Colour	Lens	OPTICAL & ELECTRONIC CHARACTERISTICS Wavelength, Chromatic Co-Ord.	IF Typical	VF Typical	IV Typical	Max Cont. If Max	PREFERRED VALUES SERIES RESISTOR (Ω) FOR 5VDC	9VDC	12VDC	Cat.	Qty 1+	Qty 10+	Qty 25+
3mm	45°	Red	Diffused	650nm	15mA	2.3V	8mcd	15mA	180	470	680	ZD0100	$0.30	$0.18	$0.15
3mm	15°	Red	Waterclear	660nm	20mA	1.8V	1500mcd	30mA	160	360	510	ZD0102	$0.75	$0.45	$0.37
3mm	20°	Red	Waterclear	625nm	20mA	2.0V	2800mcd	50mA	150	360	510	ZD0104	$1.25	$0.75	$0.60
3mm	15°	Red	Waterclear	625nm	20mA	2.1V	7200mcd	30mA	150	360	510	ZD0106	$1.75	$1.05	$0.85
3mm	45°	Orange	Diffused	625nm	20mA	1.9V	30mcd	30mA	160	360	510	ZD0119	$0.30	$0.18	$0.15
3mm	50°	Yellow	Diffused	585nm	20mA	2.1V	10mcd	20mA	150	360	510	ZD0110	$0.30	$0.18	$0.15
3mm	20°	Yellow	Waterclear	588nm	20mA	2.0V	3000mcd	50mA	150	360	510	ZD0112	$1.15	$0.65	$0.55
3mm	15°	Yellow	Waterclear	588nm	20mA	2.2V	7200mcd	50mA	150	360	510	ZD0114	$1.65	$0.95	$0.80
3mm	50°	Green	Diffused	573nm	20mA	2.3V	40mcd	20mA	130	330	470	ZD0120	$0.30	$0.18	$0.15
3mm	20°	Green	Waterclear	568nm	20mA	2.1V	500mcd	30mA	150	360	510	ZD0122	$0.75	$0.45	$0.37
3mm	20°	Green	Waterclear	520nm	20mA	3.2V	6500mcd	20mA	91	300	470	ZD0124	$1.45	$0.85	$0.70
3mm	20°	Green	Waterclear	525nm	30mA	3.2V	18000mcd	100mA	150	360	510	ZD0125	$2.45	$1.45	$1.20
3mm	15°	Aqua	Waterclear	505nm	20mA	3.5V	4000mcd	30mA	30	75	270	ZD0126	$1.65	$0.95	$0.80
3mm	15°	Blue	Waterclear	465nm	20mA	3.3V	1500mcd	20mA	82	300	430	ZD0130	$1.15	$0.65	$0.55
3mm	15°	Blue	Waterclear	470nm	20mA	3.2V	6000mcd	30mA	91	300	430	ZD0132	$1.55	$0.90	$0.75
3mm	20°	Blue	Waterclear	468nm	30mA	3.2V	10500mcd	100mA	150	360	510	ZD0134	$2.25	$1.35	$1.10
3mm	15°	White	Waterclear	0.31/0.32	20mA	3.2V	1000mcd	20mA	91	300	430	ZD0140	$1.15	$0.65	$0.55
3mm	20°	White	Waterclear	500nm	30mA	3.2V	15000mcd	100mA	150	360	510	ZD0144	$2.45	$1.45	$1.20

5mm LEDs

Size	Viewing Angle	Colour	Lens	OPTICAL & ELECTRONIC CHARACTERISTICS Wavelength, Chromatic Co-Ord.	IF Typical	VF Typical	IV Typical	Max Cont. If Max	PREFERRED VALUES SERIES RESISTOR (Ω) FOR 5VDC	9VDC	12VDC	Cat.	Qty 1+	Qty 10+	Qty 25+
5mm	50°	Red	Diffused	700nm	20mA	2.3V	12mcd	30mA	130	330	470	ZD0150	$0.40	$0.24	$0.20
5mm	15°	Red	Waterclear	660nm	20mA	1.7V	1200mcd	30mA	160	360	510	ZD0152	$0.85	$0.77	$0.60
5mm	15°	Red	Waterclear	625nm	20mA	2.0V	3800mcd	50mA	150	360	510	ZD0154	$1.25	$0.75	$0.60
5mm	15°	Red	Waterclear	625nm	20mA	2.1V	9600mcd	50mA	150	360	510	ZD0156	$1.65	$0.95	$0.80
5mm	8°	Red	Waterclear	616nm	50mA	2.1V	20000mcd	50mA	62	150	200	ZD1790	$2.25	$1.35	$1.10
5mm	15°	Red	Waterclear	624nm	30mA	2.1V	23500mcd	30mA	100	240	330	ZD0293	$2.95	$1.75	$1.45
5mm	40°	Orange	Diffused	635nm	20mA	2.0V	80mcd	30mA	150	360	510	ZD0169	$0.40	$0.24	$0.20
5mm	50°	Yellow	Diffused	585nm	20mA	2.1V	70mcd	30mA	150	360	510	ZD0160	$0.40	$0.24	$0.20
5mm	15°	Yellow	Waterclear	590nm	20mA	2.2V	2500mcd	20mA	150	360	510	ZD0162	$0.75	$0.45	$0.37
5mm	15°	Yellow	Waterclear	588nm	20mA	2.0V	4000mcd	50mA	150	360	510	ZD0164	$1.15	$0.65	$0.55
5mm	15°	Yellow	Waterclear	588nm	20mA	2.3V	12000mcd	50mA	130	330	470	ZD0166	$1.75	$1.05	$0.85
5mm	15°	Yellow	Waterclear	591nm	30mA	2.1V	23500mcd	30mA	100	230	330	ZD0295	$2.95	$1.75	$1.45
5mm	50°	Green	Diffused	570nm	20mA	2.3V	80mcd	30mA	130	330	470	ZD0170	$0.40	$0.24	$0.20
5mm	30°	Green	Waterclear	525nm	20mA	3.5V	7500mcd	30mA	75	270	430	ZD0172	$1.25	$0.75	$0.60
5mm	15°	Green	Waterclear	515nm	20mA	3.5V	8500mcd	30mA	75	270	430	ZD0174	$1.30	$0.75	$0.65
5mm	20°	Green	Waterclear	525nm	20mA	3.2V	10000mcd	20mA	91	300	430	ZD0176	$2.25	$1.35	$1.10
5mm	20°	Green	Waterclear	525nm	30mA	3.2V	36000mcd	100mA	150	360	510	ZD0177	$2.75	$1.65	$1.35
5mm	15°	Green	Waterclear	527nm	30mA	3.2V	64600mcd	30mA	62	200	300	ZD0292	$3.50	$2.10	$1.75
5mm	15°	Aqua	Waterclear	505nm	20mA	3.5V	7000mcd	30mA	75	270	430	ZD0178	$1.65	$0.95	$0.80
5mm	40°	Blue	Diffused	470nm	20mA	3.3V	350mcd	30mA	82	300	430	ZD0185	$0.95	$0.57	$0.47
5mm	15°	Blue	Waterclear	468nm	20mA	3.2V	2500mcd	30mA	91	300	430	ZD0180	$1.15	$0.65	$0.55
5mm	15°	Blue	Waterclear	470nm	20mA	3.2V	6500mcd	30mA	91	300	430	ZD0182	$1.65	$0.95	$0.80
5mm	20°	Blue	Waterclear	470nm	30mA	3.2V	13500mcd	100mA	150	360	510	ZD0183	$2.45	$1.45	$1.20
5mm	15°	Blue	Waterclear	470nm	30mA	3.2V	23500mcd	30mA	62	200	300	ZD0291	$3.50	$2.10	$1.75
5mm	30°	White	Waterclear	0.31/0.31	20mA	3.2V	4000mcd	30mA	91	300	430	ZD0190	$1.15	$0.65	$0.55
5mm	20°	White	Waterclear	0.31/0.32	20mA	3.2V	7000mcd	30mA	91	300	430	ZD0192	$1.65	$0.95	$0.80
5mm	15°	White	Waterclear	0.31/0.32	20mA	3.3V	18000mcd	30mA	82	300	430	ZD0195	$2.25	$1.35	$1.10
5mm	20°	White	Waterclear	500nm	30mA	3.2V	33000mcd	100mA	150	360	510	ZD0196	$2.75	$1.65	$1.35
5mm	15°	White	Waterclear	0.29/0.29	30mA	3.2V	45000mcd	30mA	62	200	300	ZD0290	$3.50	$2.10	$1.75
5mm	30°	UV	Waterclear	405nm	20mA	3.3V	60mcd	20mA	91	300	430	ZD0260	$1.75	$1.05	$0.85

LED TESTER

LED Tester

With this basic but essential tool it is possible to check the function, brightness, colour and polarity of most kinds of light emitting diodes (LED). The LED to be tested plugs into the front panel, at the current you wish to test it with. Two 10mA positions have been included on this multi-LED tester so that comparisons between two LEDs can be made simultaneously. 9V battery required.

- Test currents: 1mA, 2.5mA, 5mA, 10mA, 20mA, 50mA
- Dimensions: 58 x 44 x 25mm

Cat.	Qty 1+	Qty 3+	Qty 6+
AA0274	$13.95	$12.35	$10.95

click & collect

Click and Collect is now available at all Jaycar stores! Simply place your order online and the team at your local store will get the order together for you, ready to collect in just 1 hour!

Standard LEDs CONTINUED

10mm LEDs

		OPTICAL & ELECTRONIC CHARACTERISTICS							PREFERRED VALUES SERIES RESISTOR (Ω) FOR						
Size	Viewing Angle	Colour	Lens	Wavelength, Chromatic Co-Ord.	IF Typical	VF Typical	IV Typical	Max Cont. If Max	5VDC	9VDC	12VDC	Cat.	Qty 1+	Qty 10+	Qty 25+
10mm	16°	Red	Diffused	635nm	20mA	2.0V	8mcd	20mA	150	360	510	ZD0200	$0.55	$0.33	$0.27
10mm	30°	Red	Waterclear	625nm	20mA	2.0V	5600mcd	50mA	150	360	510	ZD0201	$1.25	$0.75	$0.60
10mm	30°	Red	Waterclear	625nm	20mA	2.0V	9600mcd	50mA	150	360	510	ZD0202	$1.85	$1.10	$0.90
10mm	60°	Red	Diffused	630nm	20mA	2.0V	270mcd	100mA	150	360	510	ZD0203	$0.75	$0.45	$0.37
10mm	20°	Orange	Waterclear	610nm	20mA	2.4V	10000mcd	50mA	130	330	470	ZD0225	$1.75	$1.05	$0.85
10mm	20°	Orange	Waterclear	600nm	20mA	2.0V	14000mcd	100mA	150	360	510	ZD0226	$2.25	$1.35	$1.10
10mm	35°	Yellow	Diffused	585nm	20mA	2.0V	90mcd	30mA	150	360	510	ZD0210	$0.55	$0.33	$0.27
10mm	30°	Yellow	Waterclear	588nm	20mA	2.0V	6000mcd	50mA	150	350	510	ZD0211	$1.35	$0.80	$0.65
10mm	30°	Yellow	Waterclear	588nm	20mA	2.2V	9600mcd	50mA	150	360	510	ZD0212	$1.75	$1.05	$0.85
10mm	60°	Yellow	Diffused	590nm	20mA	2.0V	210mcd	100mA	150	360	510	ZD0213	$0.75	$0.45	$0.37
10mm	50°	Green	Diffused	570nm	20mA	2.2V	100mcd	20mA	150	360	510	ZD0205	$0.55	$0.33	$0.27
10mm	30°	Green	Waterclear	525nm	20mA	3.1V	9000mcd	20mA	100	300	430	ZD0206	$1.95	$1.15	$0.95
10mm	20°	Green	Waterclear	525nm	30mA	3.5V	13000mcd	100mA	150	360	510	ZD0208	$2.25	$1.35	$1.10
10mm	20°	Green	Waterclear	525nm	20mA	3.2V	51000mcd	100mA	150	360	510	ZD0209	$3.50	$2.10	$1.75
10mm	20°	Blue	Waterclear	470nm	20mA	3.2V	8500mcd	100mA	150	360	510	ZD0208	$2.50	$1.50	$1.25
10mm	30°	White	Waterclear	0.25/0.26	20mA	3.2V	5000mcd	30mA	91	300	430	ZD0220	$1.95	$1.15	$0.95

2mm Tower LEDs

		OPTICAL & ELECTRONIC CHARACTERISTICS							PREFERRED VALUES SERIES RESISTOR (Ω) FOR						
Size	Viewing Angle	Colour	Lens	Wavelength, Chromatic Co-Ord.	IF Typical	VF Typical	IV Typical	Max Cont. If Max	5VDC	9VDC	12VDC	Cat.	Qty 1+	Qty 10+	Qty 25+
2mm	60°	Red	Diffused	624nm	20mA	2.0V	600mcd	100mA	150	360	510	ZD0040	$0.75	$0.45	$0.37
2mm	60°	Orange	Diffused	590nm	20mA	2.0V	350mcd	100mA	150	360	510	ZD0060	$0.75	$0.45	$0.37
2mm	60°	Yellow	Diffused	605nm	20mA	2.0V	270mcd	100mA	150	360	510	ZD0050	$0.75	$0.45	$0.37
2mm	60°	Green	Diffused	525nm	20mA	3.2V	2200mcd	100mA	150	360	510	ZD0070	$0.95	$0.57	$0.47
2mm	60°	Blue	Diffused	470nm	20mA	3.2V	780mcd	100mA	150	360	510	ZD0080	$0.75	$0.45	$0.37

5 X 2mm Rectangular LEDs

		OPTICAL & ELECTRONIC CHARACTERISTICS							PREFERRED VALUES SERIES RESISTOR (Ω) FOR						
Size	Viewing Angle	Colour	Lens	Wavelength, Chromatic Co-Ord.	IF Typical	VF Typical	IV Typical	Max Cont. If Max	5VDC	9VDC	12VDC	Cat.	Qty 1+	Qty 10+	Qty 25+
5 x 2mm	155°	Red	Diffused	643nm	20mA	2.3V	5mcd	20mA	130	330	470	ZD0230	$0.40	$0.24	$0.20
5 x 2mm	155°	Yellow	Diffused	590nm	20mA	1.9V	10mcd	20mA	160	360	510	ZD0234	$0.40	$0.24	$0.20
5 x 2mm	155°	Green	Diffused	573nm	20mA	2.3V	15mcd	20mA	130	330	470	ZD0232	$0.40	$0.24	$0.20

5mm Superflux

5mm	90°	White	Waterclear	0.29/0.29	35mA	3.6V	3000mcd	35mA	43	160	240	ZD0020	$1.95	$1.75	$1.35

Bi-Colour LEDs

		OPTICAL & ELECTRONIC CHARACTERISTICS							PREFERRED VALUES SERIES RESISTOR (Ω) FOR						
Size	Viewing Angle	Colour	Lens	Wavelength, Chromatic Co-Ord.	IF Typical	VF Typical	IV Typical	Max Cont. If Max	5VDC	9VDC	12VDC	Cat.	Qty 1+	Qty 10+	Qty 25+
3	65°	Red	Diffused	605nm	20mA	2.1V	20mcd	30mA	150	360	510	ZD0248	$0.85	$0.76	$0.59
	65°	Green	Diffused	570nm	20mA	2.3V	45mcd	30mA							
5	90°	Red	Diffused	625nm	20mA	2.1V	7.6mcd	30mA	150	360	510	ZD0250	$0.85	$0.76	$0.59
	90°	Green	Diffused	567nm	20mA	2.2V	10mcd	30mA							
10	75°	Red	Diffused	625nm	20mA	2.0V	10mcd	30mA	150	360	510	ZD0255	$1.25	$1.10	$0.85
	75°	Green	Diffused	570nm	20mA	2.1V	10mcd	30mA							
3	75°	Orange	Diffused	625nm	20mA	2.0V	4.5mcd	30mA	150	360	510	ZD0249	$0.85	$0.76	$0.59
	75°	Green	Diffused	570nm	20mA	2.1V	6mcd	30mA							
5	90°	Orange	Diffused	625nm	20mA	2.1V	70mcd	30mA	150	360	510	ZD0252	$0.85	$0.76	$0.59
	90°	Green	Diffused	568nm	20mA	2.2V	80mcd	30mA							
10	75°	Red	Diffused	625nm	20mA	2.0V	10mcd	30mA	150	360	510	ZD0256	$0.95	$0.85	$0.66
	75°	Green	Diffused	570nm	20mA	2.1V	10mcd	30mA							

Tri-Colour LEDs

5 Common Cathode	45°	Red	Diffused	625nm	20mA	2.0V	600mcd	30mA	150	360	510	ZD0270	$2.75	$2.45	$1.90
	45°	Green	Diffused	520nm	20mA	3.5V	1000mcd	30mA	75	270	430				
	45°	Blue	Diffused	470nm	20mA	3.5V	200mcd	30mA	75	270	430				
5 Superflux Common Anode	60°	Red	Waterclear	643nm	20mA	1.8V	200mcd	20mA	160	360	510	ZD0010	$2.50	$2.25	$1.75
	60°	Green	Waterclear	528nm	20mA	3.2V	900mcd	20mA	91	300	470				
	60°	Blue	Waterclear	468nm	20mA	3.2V	150mcd	20mA	91	300	470				

LED ACCESSORIES & DISPLAYS

LED Packs

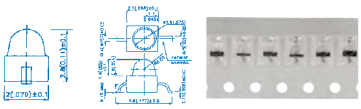
- 5-20mcd @ 20mA typical

	Cat.	Qty 1+	Qty 10+	Qty 25+
Red - 3mm Pkt 100	ZD1692	$12.95	$11.45	$8.95
Red - 5mm Pkt 100	ZD1690	$16.95	$14.95	$11.45
Assorted Pkt 100 - mixed colours, 3-5mm - bonus 10 x 5mm mounting hardware!	ZD1694	$24.95	$22.45	$17.45

SMD LEDs

Range of 3 colours in "Gull Wing" style package.

- Water clear lens



	Pkt	Type	Cat.	Qty 1+	Qty 10+
Red	10	625nm - 70mcd @ 20mA	ZD2000	$2.95	$2.65
Yellow	10	590nm- 40mcd @ 20mA	ZD2005	$2.95	$2.65
Green	10	565nm - 100mcd @ 20mA	ZD2010	$2.95	$2.65

LED ACCESSORIES

LED Clips

- Black
- 3mm requires a 4mm panel hole, 5mm needs a 6.35mm
- Simply push clip in panel & insert LED

		Cat.	Qty 1+	Qty 10+	Qty 25+
Pkt 20	3mm	HP1100	$3.95	$3.55	$2.75
Pkt 20	5mm	HP1102	$3.95	$3.55	$2.75
Pkt 100	5mm	HP1103	$12.95	$11.45	$8.95

10mm LED Bezels

- Black, requires a 14mm panel hole and simply snaps in. LED not included

	Cat.	Qty 1+	Qty 10+	Qty 25+
Pkt 5	HP1110	$4.95	$4.45	$3.45

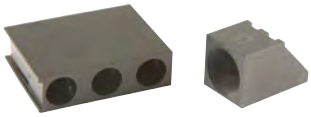
100mm Light Transporters - Pack of 3

These fibre optic light transporters are simply clipped over the LED and mounted to the panel. With high light conductivity the intensity will not diminish. Much easier to install than LED clips!

- Hole cut-out size: 3.5mm

	Pack	Cat.	Qty 1+	Qty 10+	Qty 25+
Suit SMD LEDs	3	HP1192	$4.95	$4.45	$3.45
Suit 3mm LEDs	3	HP1193	$4.95	$4.45	$3.45

LED Mounts



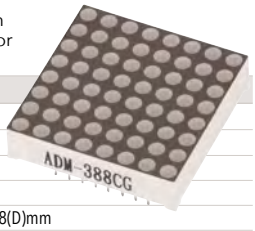
3mm 3 Way Vert. - HP1118
5mm single Horz 45° - HP1114 & HP1115

	Size	Cat.	Qty 1+	Qty 10+	Qty 25+
Pkt 20	3mm	HP1118	$3.95	$3.55	$2.75
Pkt 20	5mm	HP1114	$3.95	$3.55	$2.75
Pkt 100	5mm	HP1115	$12.95	$11.45	$8.95

LED MATRIX DISPLAYS

8x8 LED Matrix

A 8x8 LED matrix module for simple graphical output display. Ideal for display of symbols, basic data, or graphics. 16 pin connection with 8 anode pins for column and 8 cathode pins for rows. Available in red or green.



Specifications	
Peak Wavelength	568nm
Luminous Intensity	15mcd
Forward Voltage(Vf)	2.2V
Forward Current (If)	40mA
Dimensions	32(H) x 32(W) x 8(D)mm

Colour	Cat.	Qty 1+	Qty 4+	Qty 10+
Green	ZD1800	$6.95	$6.25	$4.85
Red	ZD1802	$6.95	$6.25	$4.85

8x8 RGB LED Matrix

A full 8x8 LED Matrix Display with a matte black background measuring 60mm x 60mm. Designed to mount directly on the XC4498 RGB LED Driver module. These modules can be stacked for extended displays.

- Full 8x8 Matrix controlled through 32 pins (8 + 8 x 3)
- Flush edges for creating extended displays
- 192 LEDs in 64 pixels

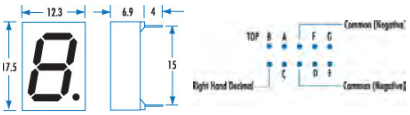
	Cat.	Qty 1+	Qty 4+	Qty 25+
RGB	ZD1810	$19.95	$17.95	$13.95

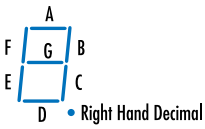
7 SEGMENT LED DISPLAYS

Small Displays

Standard 7 segment LED module for numerical output display. Designed to be fitted in close format to allow display of larger numbers.

Specifications	
Digit Dimensions	13.2(H) x 7.6(W)mm
Package Dimensions	17.5(H) x 12.3(W) x 7(D)mm
Common Part Number	FND500 / LTS543R / S505RWB
Forward voltage (Vf)	2.1V
Forward current (If)	10mA

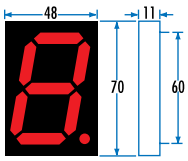




Colour		Cat.	Qty 1+	Qty 10+	Qty 25+
Red	Common Cathode	ZD1855	$2.95	$2.65	$2.05
Red	Common Anode	ZD1857	$2.95	$2.65	$2.05
Blue	Common Cathode	ZD1856	$5.95	$5.35	$4.15

Super Large Display - Red

COMMON CATHODE



Super large format 7 segment LED module for numerical output display. Designed to be fitted in close format to allow display of larger numbers.

Specifications	
Digit Dimensions	56.8 (H) x 32.4 (W)mm
Package Dimensions	69.7(H) x 47.8(W) x 12(D)mm
Luminous Intensity (IV)	4mcd per segment @ 10mA
Viewing Angle	150°
Forward Voltage (VF)	Segments 8V, decimal 2V
Forward Current (IF)	50mA
Face Colour	Grey
Max Current Per Segment	30mA
Forward Current (IF)	10mA

Colour	Cat.	Qty 1+	Qty 10+	Qty 25+
Red	ZD1850	$7.95	$7.15	$5.55

16 SEGMENT LED DISPLAYS

Green 16 Segment LED Display

Full function 16 segment LED module for alphabetical and numerical output display. Designed to be fitted in close format to allow display of words and larger numbers.

Specifications	
Digit Dimensions	20.3(H) x 11(W)mm
Package Dimensions	27.7(H) x 20.0(W) x 8.5(D)mm
Forward Voltage (VF)	2.2V
Forward Current (IF)	50mA

Colour		Cat.	Qty 1+	Qty 4+	Qty 10+
Green	Common Cathode	ZD1824	$3.95	$3.55	$2.75
Green	Common Anode	ZD1826	$3.95	$3.55	$2.75

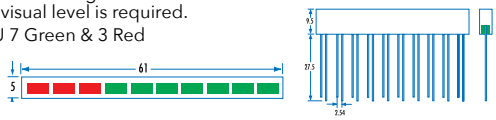
LED DISPLAYS & BEZELS

BAR GRAPHS & DISPLAYS

LED Bar Graph

5mm x 2.5mm rectangular LEDs mounted in a black housing. Ideal for VU meters or where any visual level is required.

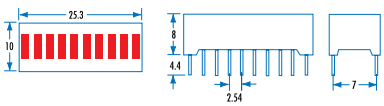
- VU 7 Green & 3 Red

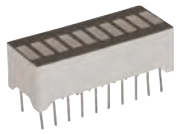


Cat.	Qty 1+	Qty 10+	Qty 25+
ZD1702	$3.45	$3.10	$2.40

DIL LED

Ten individual LED elements housed in a 20 pin package to form a compact linear bar display which may be stacked end to end to create bar graphs of different lengths. Will plug into a standard 20 pin IC socket. 10 red LEDs. Typical intensity is 2.2mcd per LED.



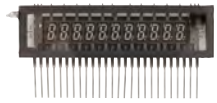


Cat.	Qty 1+	Qty 10+	Qty 25+
ZD1704	$2.95	$2.65	$2.05

11 Digit Fluoro Display

Vacuum fluorescent displays - still look the best. Each digit measures 6.0(H) x 3.5(W) mm, 11 digits in all. The display also features an apostrophe in the top right hand corner of the digits, and a semicolon (;) in the bottom in all 11 digits.

- Futaba brand
- Electrical and mechanical data is included



Cat.	Qty 1+	Qty 10+	Qty 25+
ZD1880	$2.95	$2.60	$1.95

DRIVER IC ALLEGRO BRAND UDN6118A FOR FLUORO DISPLAY ABOVE.

Cat.	Qty 1+	Qty 10+	Qty 25+
ZD1882	$9.95	$8.75	$6.75

4 Digit Field Effect LCD

Suitable for meters, gauges, timers, counters and 12/24hr clocks. Extremely easy to drive and no external driver IC required. 40 pin package. Use Cat PI6470 for socket mounting (2pc required)

- Driving voltage: 3 volts
- Digit height: 12.7mm
- View area: 45 x 17 / Display size: 51 x 30.5mm
- Pin spacing: 2.5mm

Cat.	Qty 1+	Qty 10+	Qty 25+
ZD1886	$9.95	$8.75	$6.75

BEZELS - LOW VOLTAGE

3mm LED Bezels - 2V

Chrome housing.

- 2V, 15 - 30mA
- Panel hole 5mm

	Cat.	Qty 1+	Qty 10+	Qty 25+
Red	SL2615	$2.75	$2.45	$1.90
Green	SL2616	$2.75	$2.45	$1.90
Blue	SL2617	$3.95	$3.55	$2.75

5mm LED Bezels - 2V

Chrome housing.

- 2V, 15 - 30mA
- Panel hole 8mm

	Cat.	Qty 1+	Qty 10+	Qty 25+
Red	SL2610	$2.75	$2.45	$1.90
Green	SL2612	$2.75	$2.45	$1.90
Blue	SL2613	$3.95	$3.55	$2.75

Mini Chrome Bezels - 12V

These are very classy and have a bright 3mm LED in the chrome casing which is only 10mm long.

- Hole cutout of only 5mm
- Supplied with flying leads about 100mm long
- Includes dropping resistor

	Cat.	Qty 1+	Qty 10+	Qty 25+
Red	SL2644	$3.50	$3.15	$2.45
Green	SL2645	$3.50	$3.15	$2.45

Chrome Bezel LED - 24V

Classy chrome casing with 3mm LED. Supplied with flying leads with resistor, 5mm hole required.

	Cat.	Qty 1+	Qty 10+	Qty 25+
Green	SL2646	$3.75	$3.35	$2.60
Red	SL2647	$3.75	$3.35	$2.60

IP67 Chrome LED Bezels - 12V

IP67 (waterproof) rated LED lamp bezel in a chrome housing. Perfect for applications where protection from dust and water ingress are required.

- 12VDC
- Panel hole: 8mm

	Cat.	Qty 1+	Qty 10+	Qty 25+
Red	SL2625	$7.95	$6.95	$5.50
Green	SL2627	$7.95	$6.95	$5.50

Low Voltage Bezels - 6 & 12V

Accepts Lilliput globes.

- Panel hole 10mm
- Length 29mm
- Requires Lilliput globes
  SL2650 6V
  SL2652 12V

	Cat.	Qty 1+	Qty 10+	Qty 25+
Red	SL2620	$2.25	$2.00	$1.80
Green	SL2622	$2.25	$2.00	$1.80

Lilliput Globes to suit Bezels

- Total length 17mm
- Width 4.5mm
- Glass length 8mm

	Current	Cat.	Qty 1+	Qty 10+	Qty 25+
6.3V	200mA	SL2650	$0.95	$0.85	$0.75
12V	120mA	SL2652	$0.95	$0.85	$0.75

Bezel Small - 12V

Red, sealed, 12 volt bright bezel for any application.

- Small size
- Panel hole 7mm
- Length 34mm

	Cat.	Qty 1+	Qty 10+	Qty 25+
Red	SL2640	$1.95	$1.75	$1.55

Bezel Medium - 12V

Red, sealed, ideal for cars as an indicator for driving lights, etc.

- Also suitable for burglar alarms
- Panel cut out 10mm
- Rectangular lens 13 x 16mm
- Length 45mm

	Cat.	Qty 1+	Qty 10+	Qty 25+
Red	SL2642	$1.95	$1.75	$1.55

12V Bezel Large - 12V

Perfect for car alarms.

- Orange lens which measures 20 x 20mm
- Panel hole 15mm

	Cat.	Qty 1+	Qty 10+	Qty 25+
Orange	SL2694	$2.95	$2.60	$2.30

LED BEZELS - HIGH VOLTAGE

Chrome Bezels - 240V

Very smart units.

- Length 32mm
- 70mm leads
- Panel hole 7mm

	Cat.	Qty 1+	Qty 10+	Qty 25+
Red	SL2632	$3.45	$3.05	$2.75
Green	SL2633	$3.45	$3.05	$2.75

Bezel - 240V

Red, spade lug connections.

- Small round flat end
- Total length 45mm
- 10mm diameter
- Cut out hole 9mm

	Cat.	Qty 1+	Qty 10+	Qty 25+
Red	SL2630	$1.95	$1.75	$1.55

40YRS OF BEZELS

SPECIALTY GLOBES & IR LEDS

GLOBES

Illuminated Doorbell Globe

Replacement globe for our doorbell SP0782 switch, can be used as a replacement for other brand doorbells.

- Length 27mm.
- Globe is 12V, but will work on lower voltages.

Cat.	Qty 1+	Qty 10+	Qty 25+
SL2720	$1.95	$1.75	$1.55

Lilliput Globes

- Total length 17mm
- Width 4.5mm
- Glass length 8mm

	Current	Cat.	Qty 1+	Qty 10+	Qty 25+
6.3V	200mA	SL2650	$0.95	$0.85	$0.75
12V	120mA	SL2652	$0.95	$0.85	$0.75

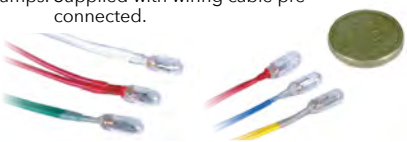
Miniature Edison Screw Globes

- Total length 27mm
- Width 9mm
- Glass length 14mm

	Current	Cat.	Qty 1+	Qty 10+	Qty 25+
6.3V	250mA	SL2654	$0.85	$0.75	$0.65
12V	100mA	SL2656	$0.85	$0.75	$0.65

Mini Lamps

A large range of various sizes & voltages of mini lamps. Supplied with wiring cable pre connected.



Qty Prices For One Type Only

Small Size	Volts	Cat.	Colour
Globe Size - 3(Ø) x 7mm	1.5	SL2680	White
PVC Lead Length - 100mm	3	SL2681	Red
Current - 0.1A	6	SL2683	Blue
	9	SL2684	Green
	12	SL2685	Yellow
Large Size	**Volts**	**Cat.**	**Colour**
Globe Size - 4(Ø) x 10mm	1.5	SL2670	White
PVC Lead Length - 150mm	3	SL2671	Red
Current - 0.1A	6	SL2673	Blue
	9	SL2674	Green
	12	SL2675	Yellow

Cat.	Qty 1+	Qty 10+	Qty 25+
All Types Each	$1.30	$1.15	$1.01

HALOGEN GLOBES

12V 10W Halogen Globe

Halogen globe.

- 12V, 10 watts
- 4mm pin spacing
- Pin length: 8mm
- Total length: 30mm
- Bulb dia: 8mm

Check pin spacing if you are replacing a blown globe.

	Cat.	Qty 1+	Qty 10+	Qty 25+
Pkt 2	SL3217	$5.95	$5.25	$4.75

12V 50W Halogen Globe

Same as 100W unit, but this one is 50W.

Check pin spacing if you are replacing a blown globe.

	Cat.	Qty 1+	Qty 10+	Qty 25+
12V 50W	SL2726	$5.95	$5.25	$4.75

12V 100W Halogen Globe

These are used in hand held spotlights.

- Fitting and contact is by 2 pins which are 6mm apart
- Length including pins is 40mm

Check pin spacing if you are replacing a blown globe.

	Cat.	Qty 1+	Qty 10+	Qty 25+
12V 100W	SL2724	$4.95	$4.45	$3.90

12V JC Halogen Globe

2 pin halogen globes.

- As used in some models of our garden lighting
- Fitting and contact is by 2 pins, 22mm long, pin spacing: 3mm, 8mm dia, 8mm pins

Check pin spacing if you are replacing a blown globe.

	Cat.	Qty 1+	Qty 10+	Qty 25+
12V 20W	SL2722	$3.95	$3.45	$3.15

TORCH GLOBES & NEONS

90V NE2 Neon

Would you believe it? After about 100 years of orangey-red neons we now can get blue and green ones! You'll buy one out of curiousity!

- Strike voltage: 82V
- Needs 270k resistor in series for 240V operation.

	Cat.	Qty 1+	Qty 10+	Qty 25+
Orange/Red	SL2690	$1.25	$1.10	$1.00
Blue	SL2695	$1.25	$1.10	$1.00
Green	SL2696	$1.25	$1.10	$1.00

Bakelite Globe Holder

High quality MES globe holder with a round bakelite base.

- No soldering required.
- Holder can easily be screwed to a base plate.
- Diameter 33mm Height 19mm.
- Suits SL2654/6
- Ideal as a simple pilot lamp

Cat.	Qty 1+	Qty 10+	Qty 50+
SL2659	$2.95	$2.60	$2.30

MES means Miniature Edison Screw

2.5V Krypton Torch Globe - MES

- 300mA
- Suitable for 2 x 1.5V batteries
- Miniature Edison Screw

	Cat.	Qty 1+	Qty 10+	Qty 25+
Pkt 2	SL3210	$2.65	$2.30	$2.07

4.8V Krypton Torch Globe - MES

- 300mA
- Miniature Edison Screw

	Cat.	Qty 1+	Qty 10+	Qty 25+
Each	SL3211	$1.95	$1.75	$1.55

MES Globe Holder

Standard MES globe holder (Torch globes).

- Suits SL2654/6

Cat.	Qty 1+	Qty 10+	Qty 50+
SL2658	$0.95	$0.85	$0.75

4.8V Flange Type Torch Globe

- 750mA
- Suitable for 4 x D batteries/ lantern

Cat.	Qty 1+	Qty 10+	Qty 25+
SL3208	$2.95	$2.60	$2.30

HANDLING HALOGEN GLOBES

Due to the high temperature of the halogen globes the glass envelope can crack unless it is very clean. If you leave grease or fingerprints on the globe, clean the glass with methylated spirits (preferably) before using.

INFRARED LEDS - TRANSMITTERS

3mm IR EMITTING DIODE

With a blue transparent lens. Similar specifications as our ZD1945.

Specifications	ZD1946
Forward Current (If)	50mA
Peak Forward Current (Lp)	200mA
Forward Voltage (Vf)	1.3V
Power Dissipation (Pd)	100mW max

Cat.	Qty 1+	Qty 10+	Qty 25+
ZD1946	$1.75	$1.55	$1.20

5mm IR EMITTING DIODE

With a blue transparent lens.

Specifications	ZD1945		
Forward Current (Lf)	50mA	Peak Spectral Wavelength (Ir)	940nm@20mA
Peak Forward Current (Lp)	1.2A	Spectral Bandwidth (Di)	50nm@20mA
Forward Voltage (Vf)	1.2V @ 20mA	Reverse Voltage (Vr)	5V max
Power Dissipation (Pd)	100mW max	Viewing Angle	30°
		Material	GaAs

Cat.	Qty 1+	Qty 10+	Qty 25+
ZD1945	$1.75	$1.55	$1.20

For next day delivery, or Click and Collect, see page A4

IR LEDS & LASER DIODE

INFRARED LEDS - RECEIVERS

BP104 Photodiode

Small square device measuring 4(W) x 5.4(L) x 2(D)mm.

Specifications	ZD1947
Reverse Voltage	60V max
Wavelength Of Max. Sens	950nm
Spectral Range Of Sensitivity	800 to 1100nm
Half Angle	±60°
Dark Current	2nA @ 10V
Open-Circuit Voltage	330mV
Short-Circuit Current	17uA
Rise And Fall Time	20ns @ 5V
Capacitance	48pF
Cathode Marking	flag on leg

Cat.	Qty 1+	Qty 10+	Qty 25+
ZD1947	$3.45	$3.10	$2.40

5mm Photodiode

Radiant sensitive area (receiving) is on the curved side of the device. Size 6.7(H) x 4.8(W)mm.

Specifications	ZD1948
Reverse Voltage	32V
Wavelength of Max Sens	970nm
Reverse Dark Current	5nA
Turn On/Off Time (Typical)	50ns
Capacitance	25pf
Open-Circuit Voltage	350mV

Cat.	Qty 1+	Qty 10+	Qty 25+
ZD1948	$1.75	$1.55	$1.20

Infrared Phototransistor

NPN phototransistor in clear 5mm LED housing.

- Collector: Short leg
- Emitter: Long Leg

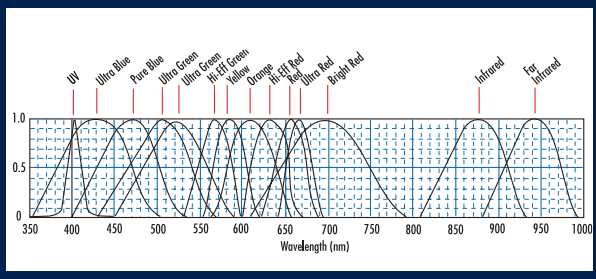
Specifications	ZD1950		
Collector-To-Emmiter Breakdown Voltage	30V	Collector dark current	100nA@10V(Vce)
Emitter-To-Collector Breakdown Voltage	5V	Rise and fall time	3us @ 5V (Vce)
Collector-To-Emitter Saturation Voltage	0.8V max	Power dissipation	100mW max

Cat.	Qty 1+	Qty 10+	Qty 25+
ZD1950	$1.75	$1.55	$1.20

Tech talk

FREQUENCY RESPONSE CURVE

Normalised Frequency Response Curve of LED Capability.



IR LED Receiver

Consists of an infrared photo diode and signal processing circuitry, (amplifier, limiter, bandpass filter & demodulator). It will detect the modulated pulse from an IR Remote Control & give a TTL level output.

- Data sheet available - see website

Specifications	ZD1952		
Supply Voltage	5V typ.	Directivity Characteristics	
Supply Voltage Max	5.5V	Horizontal:	45°
Current Consumption	0.95mA	Vertical:	35°
Arrival Distance Length	12m typ.		
Centre Frequency	37.9kHz		

Cat.	Qty 1+	Qty 10+	Qty 25+
ZD1952	$7.95	$7.15	$5.55

TSOP4136 IR Receiver

Consists of PIN diode, pre-amplifier, AGC, pass filter, and demodulator. The main benefits are high speed data rates, short burst transmission codes, and suits cable TV remotes.

Specifications	ZD1953		
Supply Voltage	4.5-5.5V / Max 6V	Directivity Characteristics	
Current Consumption	1.2mA	Horizontal:	45°
Arrival Distance Length	20m	Vertical:	35°
Centre Frequency	36kHz		

Cat.	Qty 1+	Qty 10+	Qty 25+
ZD1953	$2.95	$2.65	$2.05

PROXIMITY SENSOR

IR Adjustable Proximity Sensor

An easy to use IR proximity sensor in adjustable threaded package for straightforward mounting.

- 5V supply for compatibility with logic level applications
- Use with Arduino® by setting sensor pin to INPUT_PULLUP mode
- 3-80cm detect range (adjustable via trimpot)
- Modulated IR to avoid interference from ambient light
- Output can sink up to 100mA for driving relays directly

	Cat.	Qty 1+	Qty 10+	Qty 25+
IR Adjustable Proximity Sensor	ZD1906	$16.95	$14.95	$13.45

LASERS

10mW Laser Diode

10mW laser diode with inbuilt PIN photodiode (PD)

- Red in colour
- Supplied with 7mm dia collimating lens

Specifications	ZD1955		
Threshold Current	24mA		
Operating Voltage	2.4V	LD reverse voltage	2V PD
Operating Current	40mA	Reverse voltage	30V
Optical Power	10mW	Dimensions	TO-18 (5.6mm dia)

Size	Cat.	Qty 1+	Qty 10+	Qty 25+
TO-18	ZD1955	$8.95	$8.05	$6.25

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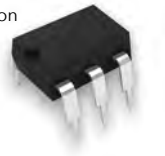
OPTOCOUPLERS

Non - Zero Crossing



- Excellent stability - IR emitting diode has low degradation
- High isolation voltage - minimum 7500VAC peak
- Underwriters Laboratory (UL) recognised - file# E90700
- Recommended for 240VAC RMS applications
- Vending machines
- Industrial controls
- Triac driver
- Solid state relay
- Motor control
- Traffic lights

Type	Pins	Cat.	Qty 1+	Qty 10+	Qty 25+
MOC3020/MOC3021	6	ZD1920	$2.25	$2.00	$1.55

Phototransistor Optocoupler

- AC line / digital logic isolator
- Relay contact monitor
- Digital logic / digital logic isolator
- Power supply monitor
- Telephone / telegraph line receiver
- Small package size and low cost
- Twisted pair line receiver
- Excellent frequency response
- High frequency power supply
- UL recognised - file# E90700 feedback control

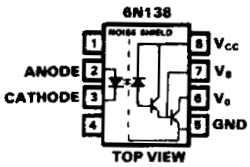
Type	Pins	Cat.	Qty 1+	Qty 10+	Qty 25+
4N28/4N25	6	ZD1928	$1.75	$1.55	$1.20

Darlington Optocoupler

- Low current - 0.5mA
- Superior CTR2000%
- Superior CMR-10 kV/µs
- Double working voltage 480VRMS
- CTR guaranteed 0-70°C
- UL recognised file# E90700

Applications:

- Digital logic ground isolation
- Telephone ring detector
- EIA-RS232C line receiver
- High common mode noise line receiver
- µP bus location
- Current loop receiver



Type	Pins	Cat.	Qty 1+	Qty 10+	Qty 25+
6N138	8	ZD1940	$2.95	$2.65	$2.05

SMD Optocouplers

Type	Pins	Pkt	Cat.	Qty 1+	Qty 10+	Qty 25+
4N35S	SOIC6	10	ZD1934	$7.95	$7.15	$5.55
TLP113	SOIC6	EA	ZD1941	$4.95		

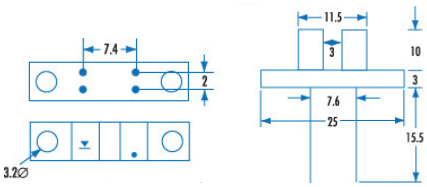
Photo Interrupter

This device enables you to turn a circuit on and off optically. It consists of a moulded plastic housing with an IR LED facing a phototransistor across a gap. Any object in the gap will interrupt the IR beam and consequently switch the phototransistor on and off. The device is very fast and ideal for counting, timing or sensing. Full specs supplied with each unit.

- PCB or chassis mounting
- Low cost
- Rugged one piece construction
- Very fast

Application:

- Counter sensor
- Tachometer
- Opto ignition
- Edge sensor
- Tape end sensor



Cat.	Qty 1+	Qty 10+	Qty 25+
ZD1901	$4.95	$4.45	$3.45

HALL EFFECT DEVICES

Hall Effect Sensor

UGN3503U HALL EFFECT SENSOR IC

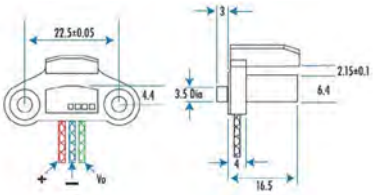
A miniature sensor to accurately track extremely small changes in magnetic flux density - changes generally too small to operate Hall effect switches. Applications include notch sensor, current monitor, gear tooth sensor, etc.

Specifications	ZD1902
Operating Voltage	4.5 - 6VDC
Supply Current	Typ. 9mA
Output Voltage	Typ. 2.5V DC
Output Resistance	50Ω
Size	4.5(W) x 4.5(H) x 1.5(D)mm

Type	Cat.	Qty 1+	Qty 10+	Qty 25+
UGN3503U	ZD1902	$7.75	$6.90	$6.15

HKZ-101 Hall Effect Switch

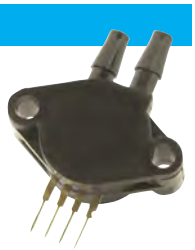
A rugged Hall effect switch designed for automotive ignition applications. This device consists of a Hall effect semiconductor sensor separated across a small gap by a magnet. In its normal state the Hall sensor (with inbuilt output transistor) is conducting. It will sink up to 40mA between the impressive temperature range of -40°C to +150°C. When an iron vane is introduced into the gap between the Hall element and the magnet, the output transistor switches off.
The sensor is hermetically sealed, resistant to petroleum products and incorporates brushed metal mounting holes to facilitate fitting to a carrier plate, bracket etc. Lead connections: Red V+, Black earth, Green signal (on/off).



Cat.	Qty 1+	Qty 10+	Qty 25+
ZD1900	$24.95	$22.35	$19.70

PRESSURE SENSOR

Pressure Differential Sensor



The ZD1904 piezo resistive pressure sensor provides a very accurate and linear voltage output directly proportional to the applied pressure. The sensor housed a single monolithic silicon die with a strain gauge and thin film resistor network on each chip.

- 0°C to 85°C temperature compensation
- 0 to 10kPa (0 to 1.45 psi)
- 25mV full scale span

Cat.	Qty 1+	Qty 10+	Qty 25+
ZD1904	$44.95	$40.45	$35.90

SPECIAL FUNCTION ICS

SMD 7 Darlington Array

High voltage, high current Darlington arrays each contain seven open collector Darlington pairs with common emitters. Each channel rated at 500mA and can withstand peak currents of 600mA. Suppression diodes are included for inductive load driving and the inputs are pinned opposite the outputs to simplify board layout.

- Sold as a pack of 10

Type	Cat.	Qty 1+
ULN2003D	ZK8858	$36.95

MCP23008 8-Bit Expander with Serial Interface DIP18

This IC will allow you to expand the number of input and output pins on your microcontroller. It uses 3 I2C pins to give 8 general purpose input/output pins. It even includes a configurable interrupt output that can be set as active-high, active-low or open-drain.44 page data sheet available for download.

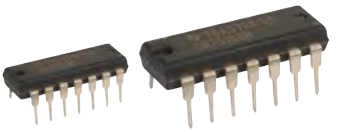
- 1.8 - 5.5VDC Input
- Low standby current (less than 1µA)
- 8 Configurable Input/Output Pins
- 1.7MHz High Speed I2C Interface
- External Reset Input

Cat.	Qty 1+	Qty 10+	Qty 25+
ZK8869	$4.95	$4.45	$3.45

SPECIAL FUNCTION ICS - THROUGH HOLE

Special Function

- Major brands only



Type	Pins	Description	Cat.	Qty 1+	Qty 10+	Qty 25+
1488	14	Quad line driver RS-232	ZZ8148	$3.75	$3.30	$2.60
1489	14	Quad line receiver RS-232	ZZ8149	$3.75	$3.30	$2.60
27C256	28	256k (32k x 8) EPROM	ZZ8471	$14.95	$13.35	$10.35
24LC16B	8	16k I2C serial EEPROM	ZZ8480	$3.75	$3.30	$2.60
24LC256	8	256k I2C serial EEPROM	ZZ8485	$5.95	$5.25	$4.15
ADC0804	20	8 bit A to D converter	ZK8862	$19.95	$17.95	$13.95
DAC0800LCN	16	8 bit D to A converter	ZK8864	$9.95	$8.95	$6.95
L6202	18	Full bridge driver 1.5A 48V	ZK8874	$14.95	$13.35	$10.35
MAX 232	16	Dual RS232 driver receiver	ZK8824	$6.95	$6.25	$4.75
MC34063	8	DC to DC converter	ZK8837	$7.95	$7.10	$5.50
UA494/TL494	16	Switchmode power contoller	ZK8850	$6.95	$6.25	$4.75
ULN2003N	16	7 Darlington array (5V TTL, CMOS)	ZK8855	$4.95	$4.45	$3.45
XR2206	16	Monolithic function generator	ZK8830	$19.95	$17.70	$13.70

ISD1820 Record and Playback IC (DIP 14)

This is the same IC as the XC4605 Record and Playback module. Simple digital control of recording and playback of audio samples, including the ability to drive an 8Ω speaker directly.

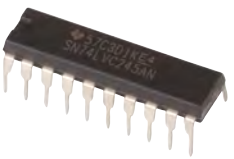
- Compact 14 pin DIP package
- Drive 8Ω speaker directly
- Loop select option
- Sample rate adjustable

	Cat.	Qty 1+	Qty 10+	Qty 25+
ISD1820 Record and Playback IC	ZZ8202	$5.95	$5.35	$4.15

74LVC245 DIP 8 Channel Bus Transceiver DIP 20

Although the full name of the ZK8884 is a 74LVC245 Octal Bus Transceiver, it also makes a great eight channel 3.3V-5V level converter. The inputs are 5V tolerant and the outputs are all 3.3V compatible.

- Eight Channels
- Direction control pin
- Output enable pin
- 20 pin DIP package suits breadboarding



	Cat.	Qty 1+	Qty 10+	Qty 25+
74LVC245	ZK8884	$4.95	$4.35	$2.95

L293D QUAD HALF Bridge Motor Driver IC

The L293D quad half H-bridge motor driver is capable of providing four high power outputs, ideal for driving a stepper motor, or two DC motors. Suitable for 3.3V or 5V logic.

- 16pin DIP IC
- 600mA current drive per channel
- 36V maximum supply voltage
- 5kHz maximum PWM frequency

	Cat.	Qty 1+	Qty 10+	Qty 25+
L293D	ZK8880	$4.95	$4.45	$3.45

L9110 Bridge Driver IC DIP 8

A compact 8 pin DIP package which can control a small motor from a microcontroller.

- Handles up to 2.5V-12V, 800mA continuous
- Interface to TTL level inputs down to 2.7V
- Suitable for reversible control on one DC motor
- Easy for prototyping on breadboards

	Cat.	Qty 1+	Qty 10+	Qty 25+
L9110 Bridge Driver IC DIP 8	ZK8882	$3.95	$3.55	$2.75

SPECIALTY ICS

MCP3008 8 Channel 10 Bit ADC DIP 16

The MCP3008 is an 8 channel 10 bit ADC (analog-to-digital converter) suitable for use with a microcontroller or single board computer. Great for adding analog inputs to chips that lack it.

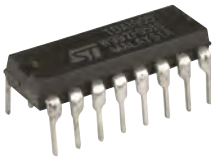
- SPI interface
- Up to 200 ksps at 5V supply
- Suits Raspberry Pi

	Cat.	Qty 1+	Qty 10+	Qty 25+
MCP3008 8 Channel 10 Bit ADC	ZK8868	$16.95	$14.95	$11.45

TDA1905 5W Amplifier IC with Mute

Monolithic integrated circuit in POWERDIP package, intended for use as low frequency power amplifier in a wide range of applications in radio and TV sets:

- Muting facility
- High supply voltage rejection
- Voltage range 4V to 30V
- Protection against chip over temperature
- Power dissipation of up to 6W and a thermal resistance of 15°C/W (junction to pins)
- Very low noise
- Low switch-on noise
- Full data on website



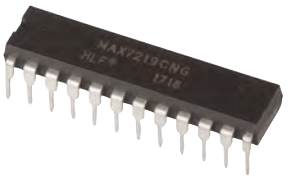
	Cat.	Qty 1+	Qty 10+	Qty 25+
TDA1905	ZL3600	$6.95	$6.25	$4.75

MAX7219 LED Matrix Driver IC

The MAX7219 is an all-in-one LED Matrix driver suitable for controlling an 8x8 LED Matrix or even eight 7 segment displays (BCD decoding can be done on the chip too). This is the same IC that is on XC4499 and XC3714.

- SPI interface (3 IO pins)
- Can be daisy chained for larger displays
- Adjustable brightness
- 24 Pin DIP package

Requires only one external component (resistor for LED current setting)



	Cat.	Qty 1+	Qty 10+	Qty 25+
MAX7219 LED Matrix Driver IC	ZK8825	$4.95	$4.45	$3.45

SMD IC BK1198 Radio Receiver

We've come a long way from cat's whiskers and triode valves to digital tuning. The ZK8829 is a digital radio IC that can pick up AM, FM and shortwave, and can be controlled by a potentiometer or resistor string. It's the same IC as in our Cardboard Radio Kit. Comes in 16 pin SOIC package, PI6530 SMD-DIP adapter is recommended for prototyping.

Specifications	ZK8829
FM Band	60 - 112MHz
AM Band	504 - 1750kHz
Shortwave Band	2.2 - 22MHz
Supply Voltage	1.6V - 3.6V

Type	Cat.	Qty 1+	Qty 10+	Qty 25+
SMD IC BK1198 Radio Receiver	ZK8829	$7.95	$7.15	$5.55

8Bit 257 Step Digital Pot - MCP4151-103E/P

8Bit (257 step) digital pots are useful in applications that require precision control. They can be used for example in the feedback network of an op amp to provide precise variable gain control, or filters to allow accurate adjustment of the filter properties.

Type	Cat.	Qty 1+	Qty 10+	Qty 25+
MCP4151-103E/P	ZK8879	$6.95	$6.25	$4.85

Are you in the trade?
For professionals engaged in electronics & construction-related industries.
trade card
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MICROCONTROLLER - ATMEL

ATMEL Microcontrollers

• 8 bit micro + flash memory

Type	Pins	Memory	Cat.	Qty 1+	Qty 10+	Qty 25+
AT90S2313-10PC	20	2kB	ZZ8710	$7.95	$7.15	
AT90S1200-12PC	20	1kB	ZZ8750	$8.95	$8.05	$6.25
ATmega8535-16PU	40	8kB	ZZ8742	$5.95		
ATmega16-8PC	40	16kB	ZZ8755	$9.95	$8.95	$6.95
ATmega32-8PC/-16PU	40	32kB	ZZ8760	$11.95		
ATmega8515-8PC	40	8kB	ZZ8765	$6.95	$6.25	$4.85

p.A84 - Arduino® boards, modules & shields

ATmega AVR RISC Microcontrollers - 16MHZ

Atmel's AVR microcontrollers utilise their famous RISC core operating at market leading speeds to make some of the best microcontroller products available. Architecture engineered for working with compiled C language programs, there is no longer a need for assembly language or a need for inefficient and unwieldy BASIC, so you can develop your project quicker without having to learn a new language.

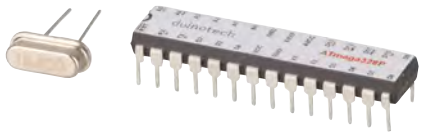
• 8 bit micro + flash memory

Type	Pins	Memory	Cat.	Qty 1+	Qty 10+	Qty 25+
ATmega8-16PI	28	8kB	ZZ8753	$8.95	$7.95	$6.25
ATmega128-16AI	40	12kB	ZZ8770	$17.95	$15.95	$12.45
ATmega162-16PI	40	6kB	ZZ8772	$14.95	$13.45	

ATmega328P MCU IC with Arduino® UNO Bootloader & 16MHz Crystal

An Atmel AVR ATmega328P microcontroller for you to build your very own customised Arduino® compatible projects. For your convenience it comes with the Arduino® Uno bootloader pre-installed and features a label on top which details the pinouts. Includes 16MHz crystal oscillator.

• Same IO pins as Duinotech Uno Board
• 0 - 4MHz @ 1.8 - 5.5V, 0 - 10MHz @ 2.7 - 5.5V, 0 - 20MHz @ 4.5 - 5.5V
• 28-pin DIP format for easy use in breadboards or Arduino® compatible boards

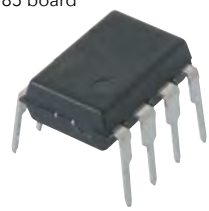


	Cat.	Qty 1+	Qty 10+	Qty 25+
ATmega328P MCU IC	ZZ8727	$12.95	$11.65	$9.05

ATtiny85 IC 8 pin DIP8

The ATtiny85 AVR is a RISC-based microcontroller in an 8 pin DIP microcontroller. The device achieves a throughput of 20 MIPS at 20MHz and operates between 2.7-5.5 volts. The ATtiny85 is also capable of being programmed as an Arduino® board using the ATtiny85 board profile and an ISP programmer.

• 8kB Flash Program Memory
• 512B EEPROM
• 512B RAM
• 6 GPIO pins (with reset disabled)
• 4 10bit ADC



	Cat.	Qty 1+	Qty 10+	Qty 25+
ATtiny85 IC 8 pin DIP8	ZZ8721	$5.95	$5.35	$4.15

END OF AN ERA

It has been a long time since surface mount components arrived on the scene. Up until recently, this has not been an issue, but we are now seeing some troubling developments.

Many I.C.'s are now becoming not available in wire lead configurations and only come in surface mount.

We will continue to try to get wire parts while they are available.

MICROCONTROLLER - PIC

Through Hole

Type	Pins	Description	Cat.	Qty 1+	Qty 10+	Qty 25+
PIC12C509A-04P	8	8 Bit micro	ZZ8600	$2.25	$2.00	$1.55

SMD

• *Sold as a pack of 5*

Type	Case	Description	Cat.	Qty 1+
PIC16C711-20I/SO	SOIC18	8 Bit micro + A to D converter	ZZ8552	$9.95

Programming & Customising the PIC Microcontroller Book

Tap into the latest advances in PIC technology with the fully revamped third edition of this brilliant book. More than 600 illustrations and comprehensive, easy-to-understand coverage of the PIC microcontroller's hardware and software schemes. With 100 experiments, projects and libraries, you get a firm grasp of PICs, how they work and the ins-and-outs of their most dynamic applications. Covers Assembly, BASIC, and C programming languages. It also covers the latest program development tools and includes a refresher in electronics and programming as well as reference material.

	Cat.	Qty 1+
Soft cover, 1263 pages	BT1347	$109.00

FLASH MEMORY CHIP

SST 49LF020 LPC Flash Memory

The SST 49LF020 flash memory device is designed to interface with the LPC bus for PC, game console and Internet Appliance applications. It provides protection for the storage and update of code and data in addition to adding system design flexibility through five General Purpose Inputs (GPI). The SST 49LF020 is in compliance with the Intel Low Pin Count (LPC) Interface Specification 1.0. Two interface modes are supported: LPC Mode for In-System programming and Parallel Programming (PP) Mode for fast factory programming.

Type	Cat.	Qty 1+	Qty 10+	Qty 25+
SST 49LF020	ZZ8900	$14.95	$13.35	$10.35

Tech talk

EMBEDDED SYSTEM MEANING?

An embedded system is a dedicated circuit, generally centred around a microprocessor (or microcontroller) which has a software program stored in dedicated on-board memory or in the memory of the microprocessor itself that has a SPECIFIC computational purpose.

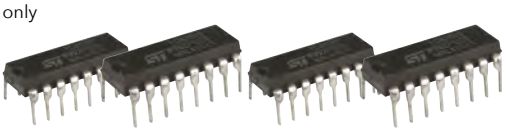
A calculator, is, for example an embedded system. It is specifically made to perform a particular task. A mobile phone is another example of an embedded system. A controller for a washing machine or a microwave oven is an example of an embedded system also.

In other words, the application is specifically embedded in the system architecture. Typically a personal computer has a "general purpose" application. Both personal computers and embedded systems are programmed by high level languages, but nowadays the programming language in a PC is less obvious as the PC generally powers up to an application's menu automatically.

The embedded system, on the other hand requires you to program the device directly through a programming language like 'C' etc. Interestingly, Smartphones which can still be regarded as an embedded system are looking more and more like PCs every day. Maybe the definitions will need to be redefined in future.

CMOS SERIES

- Standard CMOS logic
- Major brands only



Type	Pins	Desciption	Cat.	Qty 1+	Qty 10+	Qty 25+
4001	14	Quad 2 input NOR gate	ZC4001	$1.15	$0.95	$0.65
4007	14	Dual comp pair plus inverter	ZC4007	$1.35	$1.15	$0.80
4009	16	Hex buffer (inverting)	ZC4009	$1.75	$1.50	$1.05
4011	14	Quad 2 input NAND gate	ZC4011	$1.15	$0.95	$0.65
4012	14	Dual 4 input NAND gate	ZC4012	$1.95	$1.70	$1.15
4013	14	Dual D flip-flop	ZC4013	$1.15	$0.95	$0.65
4015	16	Dual 4 bit static shift register	ZC4015	$1.75	$1.50	$1.05
4016	14	Quad bi-lateral switch	ZC4016	$1.15	$0.95	$0.65
4017	16	Decade counter/divider	ZC4017	$1.15	$0.95	$0.65
4018	16	Presettable divide by N counter	ZC4018	$2.75	$2.35	$1.65
4020	16	14-stage ripple carry binary counter	ZC4020	$1.95	$1.65	$1.15
4021	16	8-stage static shift register	ZC4021	$1.95	$1.65	$1.15
4022	16	Divide-by-8 counter/divider	ZC4022	$1.95	$1.65	$1.15
4023	14	Triple 3 input NAND gate	ZC4023	$1.25	$1.05	$0.75
4024	14	7-stage ripple carry binary counter	ZC4024	$1.25	$1.05	$0.75
4025	14	Triple 3-input NOR gate	ZC4025	$1.25	$1.05	$0.75
4026	16	Decade counter with 7 segment output	ZC4026	$2.45	$2.10	$1.45
4027	16	Dual JK flip-flop	ZC4027	$1.15	$0.95	$0.65
4028	16	BCD-to-Decimal Decoder	ZC4028	$1.15	$0.95	$0.65
4029	16	Presettable bin/decade up/down cntr	ZC4029	$1.75	$1.50	$1.05
4030	14	Quad 2 input exclusive OR gate	ZC4030	$1.75	$1.50	$1.05
4040	16	12-stage ripple carry binary counter	ZC4040	$1.75	$1.50	$1.05
4046	16	Micropower phase locked loop (PLL)	ZC4046	$1.95	$1.65	$1.15
4047	14	Monostable/Astable multivibrator	ZC4047	$2.15	$1.85	$1.25
4049	16	Hex buffer (inverting)	ZC4049	$1.15	$0.95	$0.65
4050	16	Hex buffer (non-inverting)	ZC4050	$1.25	$1.10	$0.75
4051	16	Single 8 channel analog mux/demux	ZC4051	$1.75	$1.50	$1.05
4052	16	Dual 4 channel analog mux/demux	ZC4052	$1.15	$0.95	$0.65
4053	16	Triple 2 channel analog mux/demux	ZC4053	$1.75	$1.50	$1.05
4056	16	BCD to 7seg LCD decoder/driver	ZC4056	$2.75	$2.35	$1.65
4060	16	14-stage ripple carry binary counter	ZC4060	$1.75	$1.50	$1.05
4066	14	Quad bi-lateral switch	ZC4066	$1.15	$0.95	$0.65
4069	14	Hex inverter	ZC4069	$1.15	$0.95	$0.65
4070	14	Quad 2 input exclusive OR gate	ZC4070	$1.15	$0.95	$0.65
4071	14	Quad 2 input OR gate	ZC4071	$1.15	$0.95	$0.65
4073	14	Triple 3 input AND gate	ZC4073	$1.15	$0.95	$0.65
4075	14	Triple 3 input OR gate	ZC4075	$1.75	$1.50	$1.05
4076	16	4 bit tri-state D-type register	ZC4076	$1.75	$1.50	$1.05
4077	14	Quad 2 input exclusive NOR gate	ZC4077	$1.75	$1.50	$1.05
4081	14	Quad 2 input AND gate	ZC4081	$1.25	$1.05	$0.75
4093	14	Quad 2 input NAND schmitt trigger	ZC4093	$1.65	$1.40	$0.95
4094	16	8-bit tri-state shift register/latch	ZC4094	$1.65	$1.40	$0.95
40106	14	Hex schmitt trigger (inverting)	ZC4914	$1.75	$1.50	$1.05
4502	16	Strobed hex tri-state inverter	ZC4502	$2.15	$1.85	$1.25
4510	16	BCD up/down counter + preset	ZC4510	$1.95	$1.65	$1.15
4511	16	BCD to 7seg decoder/driver	ZC4511	$1.95	$1.65	$1.15
4516	16	Binary up/down counter + preset	ZC4516	$2.65	$2.30	$1.55
4518	16	Dual BCD up counter	ZC4518	$2.15	$1.85	$1.25
4520	16	Dual binary up counter	ZC4520	$1.95	$1.65	$1.15
4538	16	Dual monostable multivibrator	ZC4538	$2.65	$2.30	$1.55
4543	16	BCD to 7seg LCD latch/decoder/driver	ZC4543	$1.75	$1.50	$1.05

TTL SERIES

- Standard TTL logic
- Major brands only

Type	Pins	Description	Cat.	Qty 1+	Qty 10+	Qty 25+
7404	14	Hex inverter	ZS5804	$3.95	$3.45	$2.35
7405	14	Hex inverter with OC outputs	ZL3405	$3.95	$3.45	$2.35
7406	14	Hex inverter with 30V OC outputs	ZS5806	$2.95	$2.55	$1.75
7407	14	Hex buffer with 30V OC outputs	ZS5807	$1.65	$1.40	$0.95

IC MANAGEMENT

Conductive Non-Static Foam Sheet

Non-static sheeting for storing CMOS, ICs, LSIs, etc.

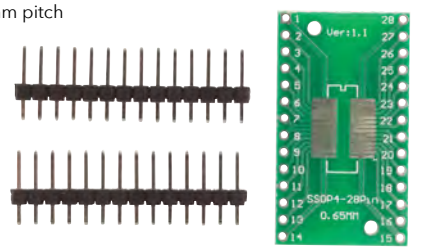
- Will store up to 150 ICs on one sheet
- Reusable, can be cut with scissors or hobby knife for smaller pieces
- Size 225x150mm

	Cat.	Qty 1+	Qty 3+	Qty 6+
Conductive Foam	ZV9998	$9.95	$8.75	$6.75

28 pin SOIC/SOP to DIP Breadboard Adaptor

More and more IC's are now only available as surface mount variants, making prototyping harder. The SMD breadboard adaptor allows SMD IC's and other smaller pitch components to be used with standard 0.1" prototyping equipment such as breadboard and protoboards.

- Suits 4-28 pin SOP/SOIC IC's (SOIC on one side, SOP on the other)
- 1.27mm pitch and 0.65mm pitch
- Header strip included

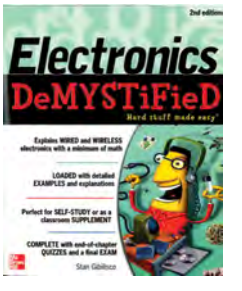


	Cat.	Qty 1+	Qty 10+	Qty 25+
28 pin SOIC/SOP to DIP Adaptor	PI6530	$2.95	$2.62	$2.35

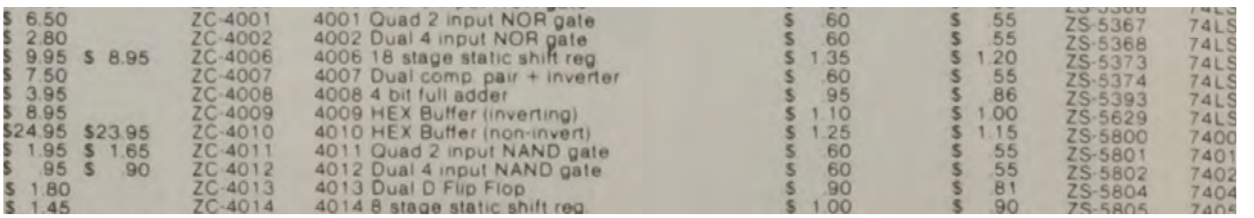
Electronics Demystified

Part of the popular Demystified series, this book teaches you electronics theory, it does not include projects. It avoids heavy mathematical formulae, but, be warned there are equations in this book. They are not seriously hard though! The book starts at simple DC circuits, goes through AC circuits, impedance, reactance, power supply concepts, semiconductor basics, amplifiers, oscillators, RF, telecommunications and finishes on antennas. At the end of each chapter is a straightforward quiz (multiple choice) to make sure you are on top of concepts. This is the best-written technical book on novice to moderately advanced electronics we have seen. Read this book and understand it - you are a serious techo.

- Dimensions: 230 x 185mm



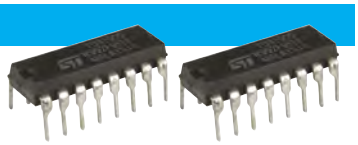
	Cat.	Qty 1+
Soft cover, 468 pages	BM7106	$44.95



$ 6.50		ZC-4001	4001 Quad 2 input NOR gate	$ .60	$ .55	ZS-5367	74LS
$ 2.80		ZC-4002	4002 Dual 4 input NOR gate	$ .60	$ .55	ZS-5368	74LS
$ 9.95	$ 8.95	ZC-4006	4006 18 stage static shift reg	$ 1.35	$ 1.20	ZS-5373	74LS
$ 7.50		ZC-4007	4007 Dual comp. pair + inverter	$ .60	$ .55	ZS-5374	74LS
$ 3.95		ZC-4008	4008 4 bit full adder	$ .95	$ .86	ZS-5393	74LS
$ 8.95		ZC-4009	4009 HEX Buffer (inverting)	$ 1.10	$ 1.00	ZS-5629	74LS
$24.95	$23.95	ZC-4010	4010 HEX Buffer (non-invert)	$ 1.25	$ 1.15	ZS-5800	7400
$ 1.95	$ 1.65	ZC-4011	4011 Quad 2 input NAND gate	$ .60	$ .55	ZS-5801	7401
$ .95	$ .90	ZC-4012	4012 Dual 4 input NAND gate	$ .60	$ .55	ZS-5802	7402
$ 1.80		ZC-4013	4013 Dual D Flip Flop	$ .90	$ .81	ZS-5804	7404
$ 1.45		ZC-4014	4014 8 stage static shift reg	$ 1.00	$ .90	ZS-5805	7405

40YRS OF CMOS

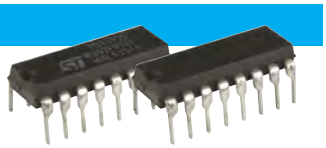
74LS SERIES



- Low power Schottky logic
- Major brands only

Type	Pins	Description	Cat.	Qty 1+	Qty 10+	Qty 25+
74LS00	14	Quad 2 input NAND gate	ZS5000	$1.95	$1.75	$1.35
74LS01	14	Quad 2 input NAND gate (OC)	ZS5001	$1.65	$1.45	$1.15
74LS02	14	Quad 2 input NOR gate	ZS5002	$1.65	$1.45	$1.15
74LS04	14	Hex Inverter	ZS5004	$1.65	$1.45	$1.15
74LS05	14	Hex inverter (OC)	ZS5005	$1.65	$1.45	$1.15
74LS08	14	Quad 2 input AND gate	ZS5008	$1.65	$1.45	$1.15
74LS10	14	Triple 3 input NAND gate	ZS5010	$1.75	$1.55	$1.20
74LS11	14	Triple 3 input AND gate	ZS5011	$1.75	$1.55	$1.20
74LS14	14	Hex schmitt trigger inverter	ZS5014	$1.55	$1.35	$1.05
74LS20	14	Dual 4 input NAND gate	ZS5020	$1.65	$1.45	$1.15
74LS27	14	Triple 3 input NOR gate	ZS5027	$2.45	$2.20	$1.70
74LS30	14	Single 8 input NAND gate	ZS5030	$1.25	$1.10	$0.85
74LS32	14	Quad 2 input OR gate	ZS5032	$1.65	$1.45	$1.15
74LS42	16	BCD to decimal decoder	ZS5042	$4.95	$4.45	$3.45
74LS47	16	BCD to 7 seg decoder/driver OC	ZS5047	$2.25	$2.00	$1.55
74LS74	14	Dual D flip-flop, preset, clear	ZS5074	$1.65	$1.45	$1.15
74LS85	16	4 bit magnitude comparator	ZS5085	$3.45	$3.10	$2.40
74LS86	14	Quad 2 input exclusive OR gate	ZS5086	$1.65	$1.45	$1.15
74LS90	14	Decade counter	ZS5090	$2.25	$2.00	$1.55
74LS93	14	4 bit binary counter	ZS5093	$4.95	$4.45	$3.75
74LS109	16	Dual JK flip-flop + preset + clear	ZS5109	$4.95	$4.45	$3.45
74LS123	16	Dual retrig monostable with clear	ZS5123	$1.95	$1.75	$1.35
74LS125	14	Quad tri-state buffer	ZS5125	$1.75	$1.55	$1.40
74LS138	16	3 to 8 line decoder/demux	ZS5138	$1.95	$1.75	$1.35
74LS139	16	Dual 2 to 4 line decoder/demux	ZS5139	$1.55	$1.35	$1.05
74LS151	16	Single 8 input multiplexer	ZS5151	$1.95	$1.75	$1.35
74LS153	16	Dual 4 input multiplexer	ZS5153	$2.25	$2.00	$1.55
74LS155	16	Dual 2 to 4 line decoder/demux	ZS5155	$2.50	$2.20	$1.75
74LS157	16	Quad 2 to 1 line multiplexer	ZS5157	$1.65	$1.45	$1.15
74LS161	16	4 bit binary counter (async. reset)	ZS5161	$2.25	$2.00	$1.55
74LS164	14	8 bit shift register (ser. in/par. out)	ZS5164	$1.65	$1.45	$1.15
74LS174	16	Hex D flip-flop + clear	ZS5174	$2.65	$2.35	$1.85
74LS175	16	Quad D flip-flop with clear	ZS5175	$1.65	$1.45	$1.15
74LS192	16	Up/down dec counter/dual clock	ZS5192	$2.75	$2.45	$1.90
74LS193	16	Up/down bin counter/dual clock	ZS5193	$2.25	$2.00	$1.55
74LS221	16	Dual monostable multivibrator	ZS5221	$1.80	$1.55	$1.25
74LS240	20	Octal tri-state buffer (inverting)	ZS5240	$2.25	$2.00	$1.55
74LS241	20	Octal tri-state buffer (non-inverting)	ZS5241	$2.50	$2.25	$1.75
74LS244	20	Octal tri-state line driver/receiver	ZS5244	$2.25	$2.00	$1.55
74LS245	20	Octal tri-state bus transceiver	ZS5245	$2.25	$2.00	$1.55
74LS273	20	Octal D flip-flop + clear	ZS5373	$2.50	$2.20	$1.75
74LS283	16	4 bit binary full adder + carry	ZS5263	$4.75	$4.25	$3.30
74LS373	20	Octal tri-state transparent latch	ZS5273	$1.95	$1.75	$1.35
74LS374	20	Octal tri state D flip-flop	ZS5274	$1.95	$1.75	$1.35

74HC SERIES



- High speed CMOS logic
- Major brands only

Type	Pins	Description	Cat.	Qty 1+	Qty 10+	Qty 25+
74HC00	14	Quad 2 input NAND gate	ZC4800	$1.25	$1.10	$0.75
74HC02	14	Quad 2 input NOR gate	ZC4802	$1.45	$1.25	$0.85
74HC04	14	Hex inverter	ZC4804	$1.45	$1.25	$0.85
74HC08	14	Quad 2 input AND gate	ZC4808	$1.45	$1.25	$0.85
74HC10	14	Triple 3 input NAND gate	ZC4810	$1.45	$1.25	$0.85
74HC14	14	Hex schmitt trig inverter	ZC4821	$1.45	$1.25	$0.85
74HC27	14	Triple 3 input NOR gate	ZC4827	$1.45	$1.25	$0.85
74HC30	14	8 input NAND gate	ZC4811	$2.25	$1.95	$1.35
74HC32	14	Quad 2 input OR gate	ZC4823	$1.45	$1.25	$0.85
74HC42	16	BCD to decimal decoder	ZC4826	$2.75	$2.35	$1.65
74HC51	14	Dual 2 wide/2 input, 2 wide/3 input AND-OR-INVERT gate	ZC4828	$2.15	$1.85	$1.25
74HC73	14	Dual JK flip-flop + clear	ZC4829	$2.15	$1.85	$1.25
74HC74	14	Dual D flip-flop + preset + clear	ZC4830	$1.45	$1.25	$0.85
74HC76	16	Dual JK flip-flop + preset + clear	ZC4832	$3.95	$3.45	$2.35
74HC85	16	4 bit magnitude comparator	ZC4834	$2.15	$1.85	$1.25
74HC86	14	Quad 2 input exclusive OR gate	ZC4835	$1.50	$1.30	$0.90
74HC107	14	Dual JK flip-flop + clear	ZC4837	$2.95	$2.55	$1.75
74HC123	16	Dual retrig monostable multivibrator + clear	ZC4840	$2.15	$1.85	$1.25
74HC125	14	Quad tri-state buffer (non-inverting)	ZC4842	$1.95	$1.65	$1.15
74HC132	14	Quad 2 input NAND gate + schmitt trig	ZC4844	$1.95	$1.65	$1.15
74HC138	16	3 to 8 line decoder/demux	ZC4846	$2.15	$1.85	$1.25
74HC139	16	Dual 2 to 4 line decoder/demux	ZC4848	$2.15	$1.85	$1.25
74HC151	16	8 to 1 line multiplexer	ZC4849	$2.15	$1.85	$1.25
74HC154	24	4 to 16 line decoder/demux	ZC4850	$3.95	$3.45	$2.35
74HC157	16	Quad 2 line to 1 line multiplexer	ZC4853	$1.75	$1.50	$1.05
74HC160	16	Synch 4 bit BCD counter + preset	ZC4855	$3.95	$3.45	$2.35
74HC161	16	Synch 4 bit binary counter + preset	ZC4856	$2.65	$2.30	$1.55
74HC164	14	8 bit ser-in/par-out shift reg	ZC4857	$1.75	$1.50	$1.05
74HC165	16	8 bit par-in/ser-out shift reg	ZC4858	$1.75	$1.50	$1.05
74HC174	16	Hex D flip-flop + clear	ZC4862	$1.75	$1.50	$1.05
74HC193	16	Synch 4 bit binary up/down counter	ZC4864	$1.95	$1.65	$1.15
74HC221	16	Dual monostable multivibrator	ZC4865	$3.25	$2.80	$1.90
74HC240	20	Octal tri-state buffer (inverting)	ZC4867	$2.85	$2.45	$1.70
74HC244	20	Octal tri-state buffer (non-inverting)	ZC4869	$1.95	$1.65	$1.15
74HC245	20	Octal tri-state transceiver	ZC4870	$1.95	$1.65	$1.15
74HC367	16	Hex tri-state buffer	ZC4872	$2.15	$1.85	$1.25
74HC373	20	Octal tri-state transparent latch	ZC4874	$1.95	$1.65	$1.15
74HC374	20	Octal tri-state D flip-flop	ZC4875	$2.15	$1.85	$1.25
74HC393	14	Dual 4 bit binary counter	ZC4880	$2.50	$2.20	$1.75
74HC573	20	Octal tri-state transparent D latch	ZC4890	$2.85	$2.45	$1.70
74HC595	16	8 bit tri-state ser-in/ser+ par-out shift reg	ZC4895	$3.35	$2.90	$1.95
74HC4066	14	Quad bilateral analog switch	ZC4892	$1.15	$0.95	$0.65

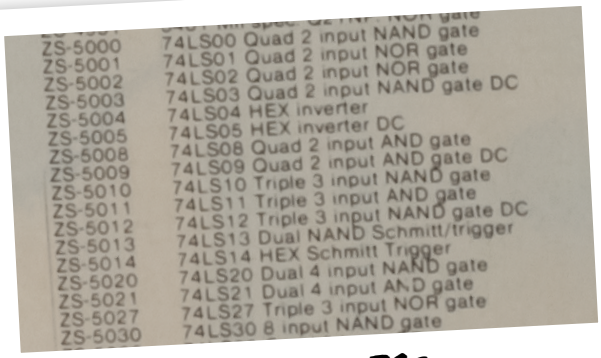
Tech talk

SOME PARTS ARE GETTING SCARCE

Many of the parts on these pages were created in the mid 60's to 70's. Whilst some are so popular, they will continue to be made for some time yet. The reality, however, is that industrial demand for many of these parts is falling off. This has not been helped by a manufacturers preference for surface mount types.

Sources for these parts is getting exotic. For example some of the types are only available from places like Russia.

Jaycar will try its hardest to keep our supply of these parts secure, but perhaps you should consider hoarding some linears that you have an ongoing need for.



40YRS OF ICS

LINEAR ICS

Through Hole

• Major brands only

Type	Pins	Description	Cat.	Qty 1+	Qty 10+	Qty 25+
AN7511	8	Balanced transformerless audio amp 1W	ZL3388	$7.95	$7.15	$5.55
BA1404	18	FM stereo transmitter	ZL3995	$9.95	$8.95	$6.95
CA3140	8	4.5MHz BiMOS op-amp	ZL3835	$3.75	$3.30	$2.60
CA3130	8	15MHz BiMOS op-amp	ZL3860	$6.95	$6.25	$4.85
INA126PA	8	Mircopower Instrument Amp	ZL3976	$9.95	$8.95	$6.95
LM301	8	High performance op-amp	ZL3301	$3.95	$3.55	$2.75
LM308	8	Precision op-amp	ZL3308	$12.95	$11.35	$8.95
LM311	8	Voltage comparator	ZL3311	$2.95	$2.65	$2.05
LM319	14	High speed dual comparator	ZL3319	$3.75	$3.30	$2.60
LM324	14	Quad low power op-amp	ZL3324	$2.35	$2.09	$1.60
LM334Z	3	Adjustable current source	ZL3334	$3.45	$3.10	$2.40
LM335Z	3	Temperature sensor TO92	ZL3336	$5.95	$5.35	$4.15
LM339	14	Quad low power comparator	ZL3339	$1.95	$1.75	$1.35
LM348	14	Quad 741 op-amp	ZL3348	$2.75	$2.45	$1.90
LM358	8	Dual low power op-amp	ZL3358	$2.25	$2.00	$1.55
LM380	14	Audio power amp 2.5W	ZL3380	$5.95	$5.35	$4.15
LM386N-1	8	Low voltage audio amp 325mW	ZL3386	$3.95	$3.55	$2.75
LM393	8	Low power dual comparator	ZL3393	$2.25	$2.00	$1.55
LM567	8	Low power tone decoder	ZL3567	$3.75	$3.30	$2.60
LM741	8	General purpose op-amp	ZL3741	$1.95	$1.75	$1.35
LM747	14	Dual op-amp	ZL3747	$5.50	$4.90	$3.75
LM833N	8	Dual low noise op-amp	ZL3833	$3.20	$2.83	$2.20
LM1458	8	Dual op-amp	ZL3753	$2.95	$2.65	$2.05
LM1875	5	25W audio power amplifier	ZL3755	$9.95	$8.95	$6.95
LM2917	14	Frequency to voltage convertor	ZL3930	$6.50	$5.75	$4.45
LM3900	14	Quad op-amp	ZL3900	$2.75	$2.45	$1.90
LM3914	18	LED bar/dot driver (linear)	ZL3914	$8.25	$7.25	$5.75
LM3915	18	LED bar/dot driver (logarithmic)	ZL3915	$8.25	$7.25	$5.75
LM4558	8	Dual high performance op-amp	ZL3958	$2.45	$2.20	$1.70
LM7555	8	CMOS timer	ZL3455	$2.95	$2.55	$1.75
LMC6482AIN	8	Dual CMOS op-amp	ZL3482	$9.95	$8.95	$6.95
LMC6484AIN	14	Quad CMOS op-amp	ZL3484	$9.95	$8.95	$6.95
NE555	8	555 timer	ZL3555	$2.25	$2.00	$1.55
NE556	14	Dual 555 timer	ZL3556	$2.75	$2.45	$1.90
NE5534N	8	Low noise op-amp	ZL3970	$3.95	$3.55	$2.75
NE5534AN	8	Ultra low noise op-amp	ZL3971	$4.85	$4.30	$3.30
OP07C/D	8	Precision op-amp	ZL3974	$5.95	$5.35	$4.15
OPA2314PA	8	Dual high perf audio op-amp	ZL3972	$12.95	$11.45	$8.95
TL071/LF351	8	Single low noise JFET op-amp	ZL3071	$2.95	$2.65	$2.05
TL072/LF353	8	Dual low noise JFET op-amp	ZL3072	$2.95	$2.65	$2.05
TL074/LF347	14	Quad low noise JFET op-amp	ZL3074	$3.75	$3.35	$2.60
TL084	14	Quad JFET op-amp	ZL3084	$3.45	$3.10	$2.40

SMD Linear IC

SMD op-amp ICs for audio applications.

• Packs of 10

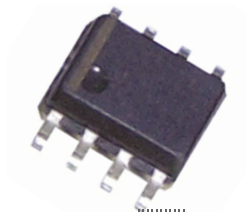
Type	Case	Description	Cat.	Qty 1+
µA741CD	SOIC8	General Purpose op-amp	ZL3070	$9.95

SMD 555 Timer ICs

- Timing from microseconds through hours
- Operates in both astable and monostable modes
- Adjustable duty cycle
- Output can source or sink 200mA
- Output and supply TTL compatible
- Normally on and normally off output
- Sold as a pack of 10

Applications:

- Timing
- Pulse generation
- Time delay generation
- Pulse width modulation
- Pulse position modulation
- Linear ramp generator



Type	Case	Description	Cat.	Qty 1+	Qty 10+	Qty 25+
NE555D	SOIC8	555 Timer	ZL3550	$13.95	$12.35	$9.75

Tech talk

555 TIMER IC

It would be a mean-spirited person who did not concede that the 555 Timer IC was - and still is - the most popular chip ever made.

Invented in 1971 by a U.S. company called Signetics, it has a number of really useful features.

Firstly it's a timer. It's a pulse generator and finally an oscillator, all in an 8 pin package.

The original version was fabricated with bipolar transistors, and although still popular a CMOS version is now dominant. The bipolar version, like 74 series TTL drew a lot of current and also created an annoying amount of switching noise on power supply rails. Such is the popularity of this circuit, it is available in standard bipolar, CMOS in single, double and quad timer packages.

Jaycar still carry the product in original form, (555) dual 556, CMOS 7555 and in a single surface mount version!

It was said that the name 555 came from the fact that the circuit contained 3 x 5k resistors used within. The inventor of the original device, Hans Camenzind disputes this, saying that the number of the part was arbitrary. Whatever, the fact is that around a billion of them are made every year in one form or another.

41 Projects Using 741 IC

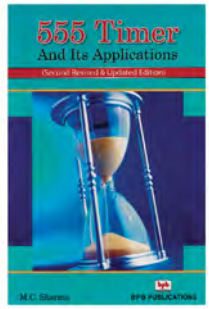
By M C Sharma. The 741 OP amp IC is very inexpensive yet is comparable to the best in respect of versatility and performance. We can't list every one of the 41 kits but here are a few examples: inverting and non-inverting AC and DC amps, crystal, magnetic, guitar, telephone and mic preamps, 3W and 12W amps, intercom, AC and DC motor control, schmitt trigger, square wave generator, flasher, timer light op relay, DC voltmeter, AC millivoltmeter, RPM counter, A to D converter, etc.

BOOK

	Cat.	Qty 1+
Soft cover, 37 pages 140 x 210mm	BM2430	$7.50

555 Timer & Its Applications

The 555 Timer IC is probably the most used IC in the world. It gives accurate timing range of micro seconds to hours. This book describes the functions and operation of the 555, then explains 21 projects to build using the IC. Some of these include photo timer, touch plate controller, car wiper control, car lights turn off, flashers, generators, delays auto power on and off, Ni-Cd charger, frequency divider, light operated relay, etc. An ideal book for the electronic hobbyist and experimenter.



BOOK

	Cat.	Qty 1+
Soft cover, 43 pages 138 x 208mm	BM2466	$7.00

IC SOCKETS

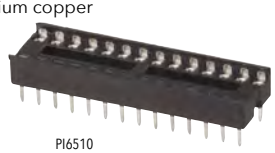
Production PCB Mount

Makes it easy to remove or replace your IC without desoldering.

- Solder tail
- All tin plated phosphor bronze or beryllium copper
- 0.1" (2.54mm) pitch

LOW COST

PI6500



PI6510

Pins	Width	Cat.	Qty 1+	Qty 10+	Qty 25+
6	0.3"	PI6499	$0.36	$0.32	$0.29
8	0.3"	PI6500	$0.38	$0.34	$0.30
14	0.3"	PI6501	$0.40	$0.36	$0.32
16	0.3"	PI6502	$0.45	$0.41	$0.36
18	0.3"	PI6503	$0.50	$0.45	$0.40
20	0.3"	PI6504	$0.55	$0.50	$0.44
22	0.3"	PI6505	$0.60	$0.54	$0.48
24	0.6"	PI6506	$0.65	$0.59	$0.52
28	0.6"	PI6507	$0.80	$0.72	$0.64
28	0.3"	PI6510	$0.75	$0.68	$0.60
40	0.6"	PI6508	$1.00	$0.85	$0.75

Gold Insert Machined Pin

- Anti-wicking very high quality
- Ideal for professional / portable or field service equipment
- 0.1" (2.54mm) pitch

Pins	Width	Cat.	Qty 1+	Qty 10+	Qty 25+
6	0.3"	PI6450	$1.15	$1.00	$0.90
8	0.3"	PI6452	$1.25	$1.10	$1.00
14	0.3"	PI6454	$1.40	$1.25	$1.10
16	0.3"	PI6456	$1.65	$1.45	$1.30
18	0.3"	PI6458	$2.45	$2.20	$1.95
20	0.3"	PI6460	$2.65	$2.35	$2.07
22	0.3"	PI6462	$2.75	$2.45	$2.15
28	0.6"	PI6466	$3.25	$2.90	$2.60
40	0.6"	PI6468	$4.50	$3.95	$3.60

IC Socket Strips

WIRE WRAP PINS

- Gold insert
- 0.1" (2.54mm) pitch
- Machined pin

Pins	Cat.	Qty 1+	Qty 10+	Qty 25+
20 Way	PI6473	$5.95	$5.25	$4.75
32 Way	PI6472	$8.50	$7.50	$6.75

Standard Pins

- Gold insert
- 0.1" (2.54mm) pitch
- Machined pin

Pins	Cat.	Qty 1+	Qty 10+	Qty 25+
32 Way	PI6470	$3.95	$3.50	$3.15

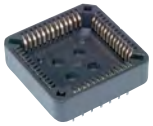
ZIF Sockets

Zero Insertion Force. Drop the device in and close the lever to contact pins. Ideal for production testing.

Pins	Cat.	Qty 1+	Qty 10+	Qty 25+
18	PI6480	$4.95	$4.45	$3.95
28	PI6483	$6.95	$6.25	$5.55
40	PI6484	$7.95	$7.15	$6.35

PLCC Sockets - Through Hole

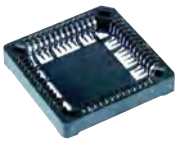
- Gold plated phosphor bronze contacts.
- Height: 7.7mm



Size	Size L X W Mm	Cat.	Qty 1+	Qty 10+	Qty 25+
28 Pin	18 x 18	PI6600	$2.95	$2.60	$2.40

Surface Mount

- Silver plated phosphor bronze contacts
- Height: 4.5mm



Size	Size L X W Mm	Cat.	Qty 1+
84 pin	36 x 36	PI6630	$0.95

SMART CARDS

Wafer Cards

With PIC16F84A + 24LC16B Inbuilt (GOLD). This is a multi-chip 'smart card' based on the PIC 16F84A and is coupled with a 24LC16B EEPROM, and compatible with most reader/programmer units available.

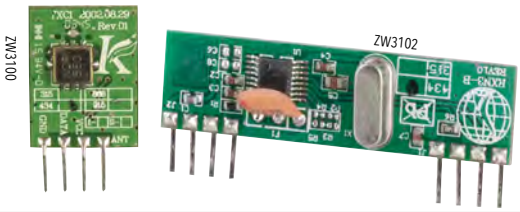
- 16K memory
- ISO 7816-1 compatible pin-out and card body
- DC to 10 MHz operating speed
- Reprogrammable with code protection
- 1024 x 14 on-chip programmable memory
- 64 x 8 internal EEPROM memory
- Enhanced code protection
- Greater than 1,000,000 Write / Erase cycles

	Cat.	Qty 1+
Gold	ZZ8800	$1.95

WIRELESS SYSTEMS

433MHz Wireless Modules

Pre-built 433MHz wireless transmitter / receiver modules featuring Amplitude-Shift Keying (ASK) encoding and are ideal for devices using short data bursts such as remote controls, trigger pulses etc.



Specifications	ZW3100	ZW3102
Output Power	3dBm	Rx sens -104dBm
Supply Voltage	3VDC	5VDC
Supply Current	10mA max	10mA max
Data Rate	300bps to 10kbps	300bps to 10kbps
PCB (Excl Pins)	18.5(H) x 14.5(W)mm	42(H) x 11(W)mm

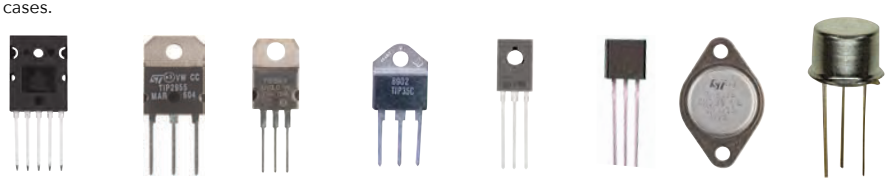
	Cat.	Qty 1+	Qty 10+	Qty 25+
Transmitter	ZW3100	$13.95	$12.35	$10.95
Receiver	ZW3102	$14.95	$13.45	$11.95

40YRS OF PCB HARDWARE

SILICON BIPOLAR TRANSISTORS - MAJOR BRANDS

- Major brands only
- Resin moulded or hermetic metal cases.

Warning: some of these parts are getting difficult to source



TO-264 SOT-93 TO-220 TO-218 TO-126 TO-92 TO-3 TO-39

Type	Polarity	Case	Pd@25°c	Vc	Ic	Hfe Min/Max	Ic Cont.	Cat.	Qty 1+	Qty 10+	Qty 25+
BC327	PNP	TO-92	625mW	50	800mA	100/630	100mA	ZT2110	$0.48	$0.43	$0.34
BC328	PNP	TO-92	625mW	30	800mA	100/630	100mA	ZT2112	$0.48	$0.43	$0.34
BC337	NPN	TO-92	625mW	50	800mA	100/630	100mA	ZT2115	$0.48	$0.43	$0.34
BC338	NPN	TO-92	625mW	30	800mA	100/630	100mA	ZT2116	$0.48	$0.43	$0.34
BC639	NPN	TO-92	830mW	80	1A	63/250	150mA	ZT2179	$0.95	$0.85	$0.65
BC546	NPN	TO-92	500mW	80	100mA	110/220	2mA	ZT2150	$0.30	$0.27	$0.21
BC547	NPN	TO-92	500mW	50	100mA	110/800	2mA	ZT2152	$0.30	$0.27	$0.21
BC548	NPN	TO-92	500mW	30	100mA	110/800	2mA	ZT2154	$0.30	$0.27	$0.21
BC549	NPN	TO-92	500mW	30	100mA	110/800	2mA	ZT2156	$0.30	$0.27	$0.21
BC550	NPN	TO-92	500mW	50	100mA	110/800	2mA	ZT2160	$0.38	$0.34	$0.27
BC556	PNP	TO-92	500mW	80	100mA	125/475	2mA	ZT2162	$0.38	$0.34	$0.27
BC557	PNP	TO-92	500mW	50	100mA	125/800	2mA	ZT2164	$0.30	$0.27	$0.21
BC558	PNP	TO-92	500mW	30	100mA	110/800	2mA	ZT2166	$0.30	$0.27	$0.21
BC559	PNP	TO-92	500mW	30	100mA	110/800	2mA	ZT2168	$0.30	$0.27	$0.21
BC640	PNP	TO-92	830mW	100	1A	63/250	150mA	ZT2180	$0.95	$0.85	$0.65
BD135	NPN	TO-126	8W	40	1.5A	63/250	150mA	ZT2187	$1.50	$1.35	$1.05
BD136	PNP	TO-126	8W	40	1.5A	63/250	150mA	ZT2188	$1.50	$1.35	$1.05
BD139	NPN	TO-126	8W	80	1.5A	63/250	150mA	ZT2189	$1.15	$1.00	$0.80
BD140	PNP	TO-126	8W	80	1.5A	63/250	150mA	ZT2190	$1.15	$1.00	$0.80
BD649	*NPN	TO-220	60W	100	8A	750	3A	ZT2198	$2.85	$2.53	$1.95
BD650	*PNP	TO-220	60W	100	8A	750	3A	ZT2199	$2.85	$2.53	$1.95
BD681	*NPN	TO-126	40W	100	4A	750	1.5A	ZT2193	$2.25	$2.00	$1.55
BD682	*PNP	TO-126	40W	100	4A	750	1.5A	ZT2192	$2.25	$2.00	$1.55
BF469	NPN	TO-126	1.8W	250	100mA	50	25mA	ZT2200	$2.45	$2.20	$1.95
BF470	PNP	TO-126	1.8W	250	100mA	50	25mA	ZT2202	$2.45	$2.20	$1.95

Type	Polarity	Case	Pd@25°c	Vc	Ic	Hfe Min/Max	Ic Cont.	Cat.	Qty 1+	Qty 10+	Qty 25+
MJ10012	*NPN	TO-3	175W	600	10A	300	3A	ZT2222	$27.95	$24.95	$19.45
MJL21193	PNP	TO-3P	200W	250	16A	25/75	8A	ZT2227	$14.50	$12.35	$9.75
MJL21194	NPN	TO-3P	200W	250	16A	25/75	8A	ZT2228	$14.50	$12.35	$9.75
MJ15003	NPN	TO-3	250W	140	20A	25/150	5A	ZT2230	$11.95	$10.45	$7.95
MJ15004	PNP	TO-3	250W	140	20A	25/150	5A	ZT2231	$11.95	$10.45	$7.95
MJ2955	PNP	TO-3	115W	100	15A	5	10A	ZT2235	$3.45	$3.05	$2.35
MJE340	NPN	TO-126	20W	300	500mA	30/240	50mA	ZT2255	$2.95	$2.60	$2.00
MJE350	PNP	TO-126	20W	300	500mA	30/240	50mA	ZT2260	$2.95	$2.60	$2.00
MJE2955	PNP	TO-220	75W	70	10A	20/100	4A	ZT2275	$2.75	$2.45	$1.90
MJE3055	NPN	TO-220	75W	70	10A	20/70	4A	ZT2280	$2.75	$2.45	$1.90
MPSA06	NPN	TO-92	625mW	80	500mA	100	10mA	ZT2286	$0.50	$0.45	$0.35
MPSA13	*NPN	TO-92	625mW	30	500mA	5000	10mA	ZT2287	$0.50	$0.45	$0.35
NJL3281D	NPN	TO-264	200W	260	25A	75/150	15A	ZT2236	$16.95	$14.95	$11.45
TIP2955	PNP	SOT-93	90W	100	15A	20/70	4A	ZT2270	$3.45	$3.05	$2.35
TIP3055	NPN	SOT-93	90W	100	15A	20/70	4A	ZT2278	$3.45	$3.05	$2.35
TIP31	NPN	TO-220	40W	40	3A	25/50	1A	ZT2285	$1.85	$1.65	$1.25
TIP32	PNP	TO-220	40W	40	3A	25/50	1A	ZT2290	$2.15	$1.90	$1.50
TIP35C	NPN	TO-218	125W	100	25A	15/75	15A	ZT2293	$5.95	$5.25	$4.15
TIP36C	PNP	TO-218	125W	100	25A	15/75	15A	ZT2294	$5.95	$5.25	$4.15
TIP41C	NPN	TO-220	65W	100	6A	15/75	3A	ZT2291	$2.45	$2.20	$1.70
TIP42C	PNP	TO-220	65W	100	6A	15/75	3A	ZT2289	$2.45	$2.20	$1.70
TIP122	*NPN	TO-220	65W	100	5A	1000	3A	ZT2292	$2.45	$2.20	$1.70

Type	Polarity	Case	Pd@25°c	Vc	Ic	Hfe Min/Max	Ic Cont.	Cat.	Qty 1+	Qty 10+	Qty 25+
2N2222A	NPN	TO-92	1.8W	75	800mA	100/300	150mA	ZT2298	$0.40	$0.36	$0.28
2N2907	PNP	TO-92	400mW	40	600mA	100/300	150mA	ZT2322	$1.15	$1.00	$0.80
2N3053	NPN	TO-39	1W	60	700mA	50/250	150mA	ZT2299	$1.15	$1.00	$0.80
2N3055	NPN	TO-3	115W	100	15A	20/70	4A	ZT2300	$2.95	$2.60	$2.00
2N3638	PNP	TO-92	300mW	25	500mA	30/130	30mA	ZT2320	$1.65	$1.45	$1.15
2N3773	NPN	TO-3	150W	160	16A	15/60	8A	ZT2324	$9.95	$8.75	$6.75
2N3904	NPN	TO-92	625mW	60	200mA	70	1mA	ZT2326	$0.75	$0.68	$0.53
2N3906	PNP	TO-92	625mW	40	200mA	80	1mA	ZT2328	$0.75	$0.68	$0.53

** Denotes Darlington type. Data representative only. Please download the manufacturer's data sheet if values are critical.*

TRANSISTORS & MOUNTING HARDWARE

TRANSISTORS MULTI-REPLACEMENT

Multi-Replacement Common Transistors

Two transistors which replace a multitude of common hard to get devices. Both are TO-92 package.

PN100

NPN general purpose medium power amp and switch with continuous collector current up to 500mA. PN100 replaces PN2221, PN2222, PN2222A, PN3565, PN3568, PN3569, PN3643, PN5133, 2N2219A, 2N2222A, 2N3414, 2N3415, 2N3416, 2N3417, 2N3700, 2N3704, 2N3904, 2N4123, 2N4124, 2N4401, 2N5088 and 2N5210.

Cat.	Qty 1+	Qty 10+	Qty 50+
ZT2283	$0.40	$0.36	$0.28

Type	Polarity	Case	VCE	IC	HFE Min/ Max
PN100	NPN	TO-92	45V	500	80-600
PN200	PNP	TO-92	45V	500	80-600

PN200

PNP general purpose amplifier at collector currents to 500mA. PN200 replaces PN2907, PN2907A, PN3638, PN3638A, PN3640, PN3644, PN4121, PN4143, PN4248, PN4249, PN4250, PN4355, PN4916, PN4917, PN5910, 2N2905A, 2N3467, 2N3702, 2N3906, 2N4125, 2N4126, 2N4291, 2N4402, 2N4403, 2N5086, 2N5087, 2N5447

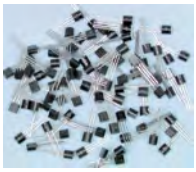
Cat.	Qty 1+	Qty 10+	Qty 50+
ZT2284	$0.40	$0.36	$0.28

TRANSISTOR PACKS

Prototype

TRANSISTOR PACK

100 mixed BC series transistors.
More of the common types.



- 15 x BC547
- 20 x BC548
- 20 x BC549
- 15 x BC557
- 15 x BC558
- 15 x BC559

Cat.	Qty 1+	Qty 10+	Qty 50+
ZT2170	$16.95	$14.95	$11.70

SMD Transistor Packs

BC817

Equivalent to BC547/8
- NPN
- SOT23-3
- 45V

Cat. ZT2118

BC807

Equivalent to BC557/8
- PNP
- SOT23-3
- 45V

Cat. ZT2121

Type	Pack	Cat.	Qty 1+	Qty 10+	Qty 50+
BC817	10	ZT2118	$1.95	$1.75	$1.35
BC807	10	ZT2121	$1.95	$1.75	$1.35

TRANSISTOR CLAMPS

Transistor Clamps

- To clamp TO-220 devices to a heatsink.

HH8600/02

HH8610

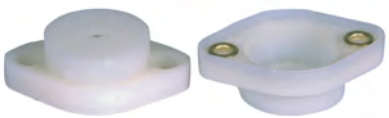
HH8607

Type		Pkt	Cat.	Qty 1+	Qty 10+	Qty 50+
Dual	TO-220	ea	HH8610	$1.45	$1.30	$1.15
Single	TO-220	10	HH8600	$8.95	$7.95	$6.95
Single	TO-220	100	HH8602	$24.95	$22.35	$19.70
Dual	TO-220	100	HH8607	$29.95	$26.95	$20.95

Full TO-3 Insulating Cap

Ideal for insulating 'live' transistors or for simply keeping prying fingers away from potentially dangerous transistor cases.

- Fastens to the transistor
- Has a single ventilation hole to decrease chance of overheating.



Cat.	Qty 1+	Qty 10+	Qty 25+
ZM9904	$1.70	$1.50	$1.15

INSULATION KITS

Silicone Rubber Transistor Insulators

Silicone impregnated rubber washers. Stop using messy silicone grease. These washers are made from silicone rubber and are as effective as mica and grease.

HP1150

Physical Properties	All
Colour	Grey
Tensile Strength	40kg/cm^2
Elongation	80%
Dielectric Breakdown Voltage	4000/0.3mm
Co-Efficient Of Thermal Conductance	2.4 x 10-3
Flammability Class	94V-0/0.3mm
Dimensional Stability	0.2% change/0.3mm

Type	Pkt	Cat.	Qty 1+	Qty 4+	Qty 10+
TO-3	20	HP1150	$12.50	$10.70	$9.50
TO-220	20	HP1155	$6.95	$6.25	$5.50
TO-220	100	HP1156	$17.95	$15.95	$14.35

Bushes to suit silicone impregnated rubber washers & mica washers TO220 - Pkt 100

Cat.	Qty 1+	Qty 10+	Qty 50+
HP1166	$9.95	$8.75	$6.75

SILICONE RUBBER INSULATING KITS

HP1172

HP1174

Type	Washers	Bushes	Cat.	Qty 1+	Qty 10+	Qty 25+
TO-3	4	8	HP1172	$3.75	$3.30	$2.60
TO-3P	4	4	HP1174	$3.75	$3.30	$2.60
TO-220	4	4	HP1176	$3.50	$3.15	$2.45

TO-3 & TO-220 MICA INSULATING KITS

Mica washers and bushes

HP1122

HP1140

Type	Pkt	Cat.	Qty 1+	Qty 10+	Qty 25+
TO-3	4	HP1122	$3.50	$3.15	$2.45
TO-220	4	HP1142	$1.95	$1.75	$1.35
TO-220	100	HP1140	$17.95	$15.95	$12.45

Adhesive Transistor Mounting Washer Kits

Adhesive silicone washers with good thermal conductivity. Makes installation of transistors a snap! Complete kit supplied including washer and bushes.

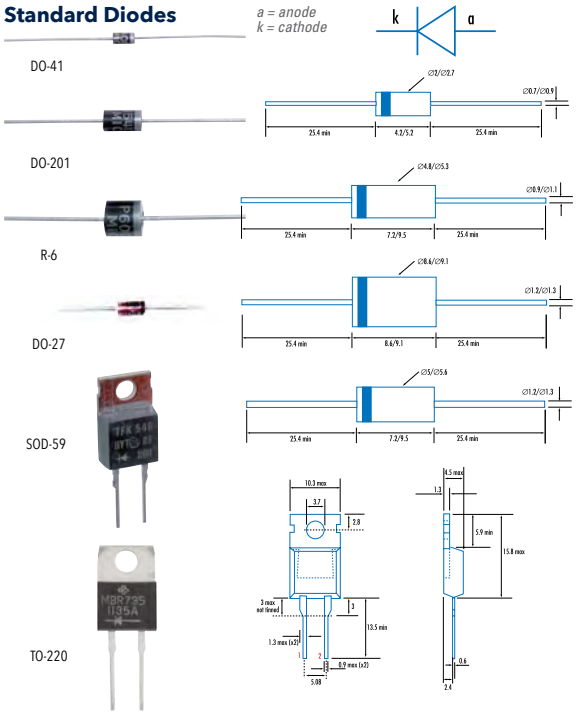
Type	Cat.	Qty 1+	Qty 4+	Qty 10+
TO-220	HP1160	$9.95	$8.95	$7.95
TO-3	HP1161	$15.95	$13.95	$12.45
TO-3P	HP1162	$12.95	$11.45	$9.95

For next day delivery, or Click and Collect, see page A4

GENERAL DIODES

Standard Diodes

a = anode
k = cathode

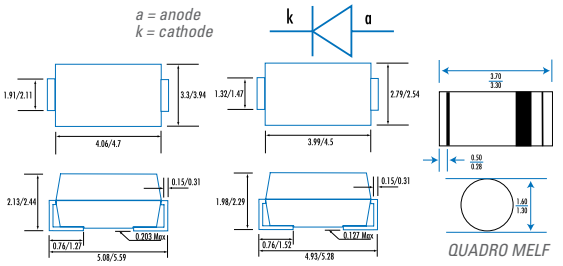


THROUGH HOLE DIODES - SSR = STANDARD SILICON RECTIFIER

Type	Description			Case	Pkt	Cat.	Qty 1+	Qty 10+	Qty 25+
1N4004	SSR	400V	1A	DO-41	4	ZR1004	$0.98	$0.73	$0.54
1N4004	SSR	400V	1A	DO-41	100	ZR1005	$8.95	$6.70	$4.90
1N4007	SSR	1000V	1A	DO-41	4	ZR1007	$1.20	$0.90	$0.65
1N4007	SSR	1000V	1A	DO-41	100	ZR1008	$12.95	$9.50	$6.95
1N4934	SSR	100V	1A	DO-41	10	ZR1001	$3.95	$2.90	$2.10
1N5404	SSR	400V	3A	DO-27	ea	ZR1014	$0.39	$0.29	$0.21
1N5404	SSR	400V	3A	DO-27	100	ZR1015	$16.95	$12.45	$8.95
1N5408	SSR	1000V	3A	DO-27	ea	ZR1018	$0.40	$0.30	$0.22
1N5408	SSR	1000V	3A	DO-27	100	ZR1017	$19.95	$14.95	$10.95
1N5711	Schottky	70V	15mA	DO-35	ea	ZR1027	$0.80	$0.60	$0.44
1N5819	Schottky	40V	1A	DO-41	ea	ZR1020	$0.80	$0.60	$0.44
1N5822	Schottky	40V	3A	DO-201	ea	ZR1048	$1.15	$0.80	$0.65
1N5822	Schottky	40V	3A	DO-27	10	ZR1023	$8.95	$6.70	$4.90
1N914/1N4148	Signal	100V	150mA	DO-27	5	ZR1100	$0.95	$0.71	$0.52
1N914/1N4148	Signal	100V	150mA	DO-27	100	ZR1105	$8.95	$6.70	$4.90
6A1/P600B	SSR	100V	6A	R-6	10	ZR1041	$13.95	$10.50	$7.75
6A4/P600G	SSR	400V	6A	R-6	10	ZR1044	$15.95	$11.95	$8.45
6A10/P600M	SSR	1000V	6A	R-6	ea	ZR1024	$2.25	$1.65	$1.20
BAT46/48	Schottky	100V	150mA	DO-27	ea	ZR1141	$1.50	$1.10	$0.80
BY229	Fast	600V	8A	SOD-59	ea	ZR1028	$6.95	$5.35	$3.75
FR302	Fast	100V	3A	DO-201	10	ZR1050	$3.95	$2.95	$2.15
FR307	Fast	1000V	3A	DO-201	10	ZR1052	$3.95	$2.95	$2.15
FR607	Fast	1000V	6A	R-6	10	ZR1054	$16.95	$12.75	$9.25
MBR20100CT	Dbl Schottky	100V	20A	TO-220	ea	ZR1039	$2.95	$2.65	$2.05
MBR735	Schottky	35V	7A	TO-220	ea	ZR1029	$1.95	$1.45	$1.05
SF37	Super Fast	600V	3A	DO-27	10	ZR1090	$7.95	$5.90	$4.30
UF4003	Ultrafast	200V	1A	DO-41	ea	ZR1034	$1.15	$0.80	$0.65
UF4004	Ultrafast	400V	1A	DO-41	ea	ZR1036	$1.50	$1.10	$0.80
UF4007	Ultrafast	1000V	1A	DO-41	ea	ZR1038	$2.00	$1.45	$1.05

SMD Diodes

a = anode
k = cathode



SURFACE MOUNT DIODES

- Sold as a pack of 10

Type	Description	Case	Cat.	Qty 1+	Qty 10+	Qty 25+
1N917/1N4148	100V 150mA	Quadro Melf	ZR1103	$6.95	$5.35	$3.75
SM4004A	400V	1A D0-214AC	ZR1003	$5.95	$4.45	$3.15
SM4934A	100V	1A D0-214AC	ZR1070	$6.95	$5.35	$3.75
SM5819A Schottky	40V	1A D0-214AC	ZR1021	$6.95	$5.35	$3.75
SM5822B Schottky	40V	3A D0-214AA	ZR1025	$6.95	$5.35	$3.75

ZENER DIODES

1 Watt Zener Diodes*

p.A218 tech talk for how zener diodes work.

Absolute Maximum Ratings	
Power Dissipation	1W
Derate Above 50°C	6.67mW/°C
Storage Temperature Range	-65°C to +200°C
Operating Junction Temperature	+200°C
Thermal Resistance Junction To Lead	53.5°C/W
Thermal Resistance Junction To Ambient	100°C/W
Lead Temperature (1/16" From Case For 10 Sec)	230°C
Surge Power*	10W
Case Size	DO-41

a = anode
k = cathode

**Non-recurrent square wave PW=8.3ms, TA=55°C*
Note 1: Ratings are based on max junction temperature of 200°C
Note 2: These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Type	Voltage	Cat.	Qty 1+	Qty 10+	Qty 50+
1N4728	3V3	ZR1398	$0.65	$0.59	$0.46
1N4729	3V6	ZR1399	$0.65	$0.59	$0.46
1N4730	3V9	ZR1400	$0.65	$0.59	$0.46
1N4731	4V3	ZR1401	$0.65	$0.59	$0.46
1N4732	4V7	ZR1402	$0.65	$0.59	$0.46

Type	Voltage	Cat.	Qty 1+	Qty 10+	Qty 50+
1N4733	5V1	ZR1403	$0.65	$0.59	$0.46
1N4734	5V6	ZR1404	$0.65	$0.59	$0.46
1N4735	6V2	ZR1405	$0.65	$0.59	$0.46
1N4736	6V8	ZR1406	$0.65	$0.59	$0.46
1N4737	7V5	ZR1407	$0.65	$0.59	$0.46
1N4738	8V2	ZR1408	$0.65	$0.59	$0.46
1N4739	9V1	ZR1409	$0.65	$0.59	$0.46
1N4740	10V	ZR1410	$0.65	$0.59	$0.46
1N4741	11V	ZR1411	$0.65	$0.59	$0.46
1N4742	12V	ZR1412	$0.65	$0.59	$0.46
1N4743	13V	ZR1413	$0.65	$0.59	$0.46
1N4744	15V	ZR1415	$0.65	$0.59	$0.46
1N4745	16V	ZR1416	$0.65	$0.59	$0.46
1N4746	18V	ZR1418	$0.65	$0.59	$0.46
1N4747	20V	ZR1420	$0.65	$0.59	$0.46
1N4748	22V	ZR1422	$0.65	$0.59	$0.46
1N4749	24V	ZR1424	$0.65	$0.59	$0.46
1N4750	27V	ZR1427	$0.65	$0.59	$0.46
1N4751	30V	ZR1430	$0.65	$0.59	$0.46
1N4752	33V	ZR1433	$0.65	$0.59	$0.46
1N4753	36V	ZR1436	$0.65	$0.59	$0.46
1N4754	39V	ZR1439	$0.65	$0.59	$0.46
1N4761	75V	ZR1475	$0.95	$0.85	$0.65

5 Watt Zener Diodes

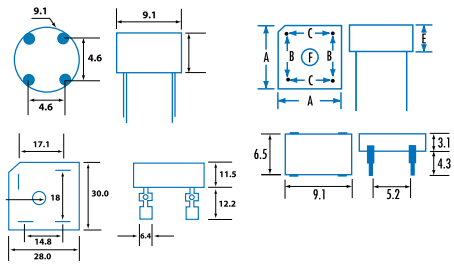
1N53XXB Series Silicon Zener Diodes are a high quality voltage regulator for use in industrial, commercial, and other applications.

a = anode
k = cathode

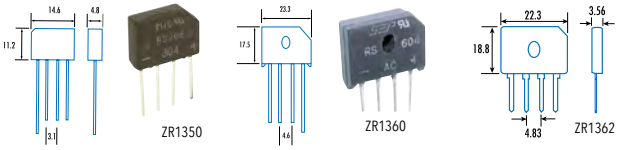
Absolute Maximum Ratings	
Power Dissipation (@TL=75°C)	5 Watts
Operating and Storage Temperature	-65°C to +200°C
Tolerence "B Suffix"	+5%

Type	Voltage	Cat.	Qty 1+	Qty 10+	Qty 50+
1N5352B	15V	ZR1450	$1.75	$1.55	$1.20
1N5349B	12V	ZR1440	$1.75	$1.55	$1.20
1N5374B	75V	ZR1480	$1.75	$1.55	$1.20

BRIDGE RECTIFIERS



DIMS(mm)	ZR1314	ZR1320
A	15.3	19.6
B	8.8	13.2
C	9.1	13.2
E	6.4	7.5
F dia.	4.0	6.0



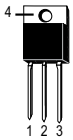
Bridge Rectifiers

Type	Voltage	Current	Cat.	Qty 1+	Qty 10+	Qty 25+
DB104	400V	1A	ZR1308	$1.25	$0.90	$0.65
W04	400V	1.2A	ZR1304	$0.95	$0.71	$0.52
BR64	400V	6A	ZR1314	$2.50	$1.85	$1.35
BR106	600V	10A	ZR1320	$2.85	$2.10	$1.50
MB354	400V	35A	ZR1324	$5.50	$4.10	$3.00

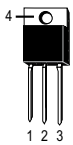
Inline Bridge Rectifiers

Type	Voltage	Current	Cat.	Qty 1+	Qty 10+	Qty 25+
RS206	800V	2A	ZR1350	$2.25	$1.65	$1.20
KBU604	400V	6A	ZR1360	$3.35	$2.45	$1.80
GBU806	800V	8A	ZR1362	$3.95	$2.90	$2.10

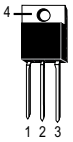
VOLTAGE REGULATORS



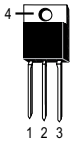
TO-220 package 78xx 1A fixed voltage regulator (+)
1 - input
2 - common (ground)
3 - output
4 - common



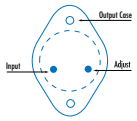
TO-220 package 317T 1.5A adjustable voltage regulator (+)
1 - adjust
2 - output
3 - input
4 - output



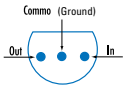
TO-220 package 79xx fixed voltage regulator (-)
1 - common (ground)
2 - input
3 - output
4 - input



TO-220 package 337T voltage regulator (-)
1 - adjust
2 - input
3 - output
4 - input



Connections for the TO-3 LM317K & LM350K (viewed from bottom)



Connections for TO-92 78LXX (viewed from bottom)

p.A217
Full Data Section

Standard Voltage Regulators

Type	Vout	Iout	Case	Cat.	Qty 1+	Qty 10+	Qty 25+
7805/LM340T5	+5V	1A	TO-220	ZV1505	$1.85	$1.65	$1.25
7806/LM340T6	+6V	1A	TO-220	ZV1506	$1.85	$1.65	$1.25
7808/LM340T8	+8V	1A	TO-220	ZV1508	$1.85	$1.65	$1.25
7809/LM340T9	+9V	1A	TO-220	ZV1509	$1.85	$1.65	$1.25
7812/LM340T12	+12V	1A	TO-220	ZV1512	$1.85	$1.65	$1.25
7815/LM340T15	+15V	1A	TO-220	ZV1515	$1.85	$1.65	$1.25
7824/LM340T24	+24V	1A	TO-220	ZV1524	$1.85	$1.65	$1.25
78L05	+5V	100mA	TO-92	ZV1539	$1.50	$1.35	$1.05
78L12	+12V	100mA	TO-92	ZV1542	$1.50	$1.35	$1.05
7905/LM320T5	-5V	1A	TO-220	ZV1525	$1.85	$1.65	$1.25
7909/LM320T9	-9V	1A	TO-220	ZV1530	$1.85	$1.65	$1.25
7912/LM320T12	-12V	1A	TO-220	ZV1532	$1.85	$1.65	$1.25
7915/LM320T15	-15V	1A	TO-220	ZV1535	$1.85	$1.65	$1.25
LM317T	+1.2 to +37V	1.5A	TO-220	ZV1615	$2.95	$2.60	$2.00
LM337T	-1.2 to -37V	1.5A	TO-220	ZV1620	$4.25	$3.75	$2.95
LM350K	+1.2 to +33V	3A	TO-3	ZV1635	$19.95	$17.95	$13.95
LM723CN	+2.0 to +37V	150mA	DIP14	ZV1676	$3.45	$3.10	$2.40
MC78T12	+12V	3A	TO-220	ZV1634	$6.95	$6.25	$4.85

Switching Voltage Regulators

Type		Vout	Iout	Case	Cat.	Qty 1+	Qty 10+	Qty 25+
LM2576T-ADJ	Stepdown	+1.23 to +37V	3A	TO-220	ZV1640	$5.95	$5.35	$4.15
LM2577T-12	Stepup	+12V	3A	TO-220	ZV1642	$11.95	$10.45	$7.95
LM2577-ADJ	Stepup	+3.5 to +50V	3A	TO-220	ZV1656	$4.95	$4.45	$3.45
LM2678T-5.0	Stepdown	+5V	5A	TO-220	ZV1636	$11.95	$10.45	$7.95
LM2678T-12	Stepdown	+12V	5A	TO-220	ZV1637	$11.95	$10.45	$7.95
TL499SCP	Controller	+2.9 to +30V	100mA	DIP8	ZV1644	$3.95	$3.55	$2.75

Low Dropout Regulators

Type	Description	Case	Vin (Typ)	Vout	Iout (Max)	Vdrop (Vout-Vin)	Cat.	Qty 1+	Qty 10+	Qty 25+
LM3940	Fixed voltage	TO-220	4.5 to 5.5V	+3.3V	1.0A	500mV at 1A	ZV1565	$4.95	$4.45	$3.45
LM2936-3.3	Ultra low quiescent current	TO-92	4.0 to 26V	+3.3V	50mA	200mV at 50mA	ZV1650	$6.95	$6.25	$4.85
LP2951ACN	Micropower adjustable voltage	DIP8	2.0 to 30V	+1.24 to +29V	100mA	380mV at 100mA	ZV1646	$2.95	$2.65	$2.05
LM2940CT-5.0	Fixed voltage	TO-220	6.25 to 26V	+5V	1.0A	500mV at 1A	ZV1560	$8.65	$7.50	$5.75
LM2940CT-12	Fixed voltage	TO-220	13.6 to 26V	+12V	1.0A	500mV at 1A	ZV1562	$8.65	$7.50	$5.75
LM2936-5.0	Ultra low quiescent current	TO-92	5.5 to 26V	+5V	50mA	200mV at 50mA	ZV1652	$6.95	$6.25	$4.85
LM1085IT-12	Fixed voltage, high current	TO-220	13.5 to 25V	+12V	3.0A	1.3V at 3A	ZV1564	$8.95	$7.95	$6.25
LP2950ACZ-5.0	Micropower fixed voltage	TO-92	6.0 to 30V	+5V	100mA	380mV at 100mA	ZV1645	$2.95	$2.65	$2.05
MCP1703-5002E/CB	Ultra low quiescent current	SOT-23	5.33 to 16V	+5V	250mA	330mV at 250mA	ZV1545	$23.95	$21.35	$16.70

MCP16311 +2-24V SMD Adjustable Voltage Regulator

The MCP16311 is a compact, high-efficiency, fixed frequency PWM/PFM, synchronous step-down DC-DC converter that operates from input voltage sources up to 30V. Integrated features include a high-side and a low-side switch, fixed frequency Peak Current Mode Control, internal compensation, peak-current limit and over temperature protection. The MCP16311 provides all the active functions for local DC-DC conversion, with fast transient response and accurate regulation.

NEW

Specifications	ZV1680
Input Voltage	4.4V to 30VDC
Output Voltage	2V to 24V
Current	1A max.

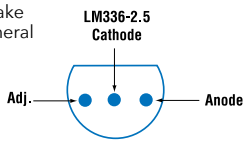
SMD

	Cat.	Qty 1+	Qty 10+	Qty 25+
MCP16311	ZV1680	$4.95	$4.45	$3.45

VOLTAGE REFERENCE DIODES

Voltage Reference Diode

Provides a stable 2.5V reference point for circuitry and can be used to make portable meters, regulators or general purpose analog circuitry.



Type	Vref	IF (min)	Case	Cat.	Qty 1+	Qty 10+	Qty 25+
LM336-2.5	2.5V	10mA	TO-92	ZV1624	$3.95	$3.50	$2.75

SCRS / TRIACS / DIACS

SCRs - Silicon Controlled Rectifiers

Reverse blocking thyristors glassivated PNPN devices designed for high volume consumer applications such as temperature, light and speed control, process and remote control and warning systems where reliability of operation is important.

- Glassivated surface for reliability and uniformity
- Power rated at economical prices
- Sensitive gate triggering
- Practical level triggering and holding characteristics
- Flat, rugged, thermopad construction for low thermal resistance, high heat dissipation and durabilty

TO-126

Type	Vmax	IE(a)	VF(V)	ig(µa)	vg(V)	Hold in (mA)	Cat.
BT169D	400	0.8	1.2	50	0.5	2	ZX7010
C106D1	400	4	2.2	200	0.8	3	ZX7006
C122E/ MCR8M / BT151	500	8	1.8	25mA	1	30	ZX7012

	Voltage	Cat.	Qty 1+	Qty 10+	Qty 25+
BT169D	400V	ZX7010	$2.95	$2.60	$2.00
CI06D1	400V	ZX7006	$2.95	$2.60	$2.00
C122E / MCR8M / BT151	500V	ZX7012	$5.50	$4.90	$3.75

TRIACs

TO-220

Type	Vmax	IE(a)	VF(V)	ig(µa)	vg(V)	Hold in (mA)	Cat.
SC141D	400	6	2	50	2.5	50	ZX7141
SC151D	400	15	1.6	50	2	50	ZX7145
TAG225	400	5	2	25	2.5	25	ZX7147
BT137F	600	8	1.65	25	1.5	<20	ZX7149*

*Note: ZX7149 is isotab - mounting tab is dielectrically isolated.

	Voltage	Cat.	Qty 1+	Qty 10+	Qty 25+
SC141D	400V	ZX7141	$4.95	$4.45	$3.45
SC151D	400V	ZX7145	$7.95	$7.15	$5.55
TAG225	400V	ZX7147	$5.95	$5.35	$4.15
BT137F	600V	ZX7149	$4.95	$4.45	$3.45

DIAC

A bi-directional trigger diode used for timing circuits, SCRs and Triacs. Exhibits useful negative resistance at breakover voltage VBR. (DO-41)

Type	VBR	IBR	Ipeak	Cat.	Qty 1+	Qty 10+	Qty 25+
ST2	32V	200µA	2A	ZX7192	$1.85	$1.65	$1.25

THERMISTORS

Negative Temperature Coefficient Thermistors

These devices are made of a special ceramic material which changes resistance value rapidly with temperature increase. They are commonly used to check thermal runaway in bipolar transistor amplifiers etc., but really have dozens of other uses. They are rugged and very reliable.

- Resistance at 25°C ±10%
- Dissipation (MAX) 500mW
- Temperature Range -20°C to +125°
- Case 5mm diameter
- Thermal dissipation constant: 6mW/°C
- Radial type, dipped epoxy
- Type-NTC Ceramic material with tinned copper lead

Resist. (Ω)	Max current (mA)		Cat.	Qty 1+	Qty 25+	Qty 100+
15	250	Ceramic	RN3430	$1.75	$1.20	$1.05
100	200	Ceramic	RN3432	$1.75	$1.20	$1.05
500	100	Ceramic	RN3434	$1.75	$1.20	$1.05
1k	80	Ceramic	RN3436	$1.75	$1.20	$1.05
4.7k	45	Ceramic	RN3438	$1.75	$1.20	$1.05
10k	30	Ceramic	RN3440	$1.75	$1.20	$1.05
47k	20	Ceramic	RN3442	$1.75	$1.20	$1.05
100k	15	Ceramic	RN3444	$1.75	$1.20	$1.05

High Temperature Glass Thermistor 100K

This high temperature NTC thermistor is suitable for operation up to 250 degrees, and is compatible with the hot-end thermistors used in many 3D printers.

- Sealed glass body with small bead for fast response
- 30mm leads

	Cat.	Qty 1+	Qty 25+	Qty 100+
100kΩ @ 25°C	RN3446	$4.95	$3.45	$2.95

VALVE SOCKETS

Valve Sockets

9 PIN:

This unit is moulded from high grade thermosetting resin. The pins are adequately plated and have deep solder terminals, sufficient for several hard wiring points per pin. Sturdy flange mount is meant for fitting above the chassis.

8 PIN:

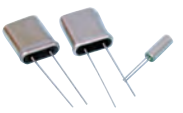
Made from similar materials to above, but with moulded key. Can be mounted above or below the chassis.

	Cat.	Qty 1+	Qty 10+	Qty 50+
9 Pin	PS2082	$6.95	$6.25	$5.50
8 Pin	PS2080	$7.95	$7.10	$6.25

CRYSTALS

Crystals

Freq Tolerance: ±30Hz per 1MHz.
Operating Temp: -20°C to +70°C.
Load Capac: 30pF typ.



RC Crystal TX/RX

- Used in remote control circuits
- *Supplied as a pair*

	Cat.	Qty 1+	Qty 10+	Qty 25+
27.095MHz	RQ5275	$9.95	$8.75	$7.75
27.125MHz	RQ5276	$9.95	$8.75	$7.75
27.145MHz	RQ5277	$9.95	$8.75	$7.75
27.175MHz	RQ5278	$9.95	$8.75	$7.75
27.195MHz	RQ5279	$9.95	$8.75	$7.75

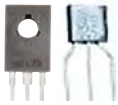
- *Below sold individually*

FREQ. (MHZ)	W X D X H (MM)	CASE	MAX ESR	Cat.	Qty 1+	Qty 10+	Qty 25+
2.00	11.05 x 4.65 x 13.46	HC49U	500Ω	RQ5268	$4.50	$3.95	$3.60
3.2768	11.05 x 4.65 x 13.45	HC49U	90Ω	RQ5271	$4.50	$3.95	$3.60
3.5795	11.05 x 4.65 x 13.46	HC49U	90Ω	RQ5272	$4.50	$3.95	$3.60
4.000	11.05 x 4.65 x 13.46	HC49U	70Ω	RQ5274	$4.50	$3.95	$3.60
4.433619	11.05 x 4.65 x 13.46	HC49U	70Ω	RQ5284	$4.50	$3.95	$3.60
6.00	11.05 x 4.65 x 13.46	HC49U	60Ω	RQ5285	$4.50	$3.95	$3.60
8.00	11.05 x 4.65 x 13.46	HC49U	30Ω	RQ5287	$4.50	$3.95	$3.60
10.00 (P)	11.05 x 4.65 x 13.46	HC49U	30Ω	RQ5289	$4.50	$3.95	$3.60
12.00	11.05 x 4.65 x 13.46	HC49U	30Ω	RQ5293	$4.50	$3.95	$3.60
16.00	11.05 x 4.65 x 13.46	HC49U	25Ω	RQ5296	$4.50	$3.95	$3.60
20.00	11.05 x 4.65 x 13.46	HC49U	25Ω	RQ5299	$4.50	$3.95	$3.60
32.768kHz	3.1 x 3.1 x 8	DT38	35kΩ	RQ5297	$4.50	$3.95	$3.60
38kHz Mini	3 x 8.5		40Ω	RQ5298	$4.50	$3.95	$3.60

MOSFETS, FETS, UJTS

MOSFETs, FETs, UJTs

• Major brands



UJTS

Type	Voltage	Description	Pack	Cat.	Qty 1+	Qty 10+	Qty 25+
2N2646	30V	UJT PN 300mW	TO-5	ZT2297	$9.95	$8.95	$6.95
2N6027	30V	UJT Programmable 300mW	TO-92	ZT2397	$1.95	$1.75	$1.35

FETS/JFETS

Type	Voltage	Current	Description	Pack	Cat.	Qty 1+	Qty 10+	Qty 25+
2N5484	25V	10mA	JFET N-Ch VHF/UHF Amp	TO-92	ZT2375	$3.95	$3.55	$2.75
2N7000	60V	200mA	FET D-MOS N-Ch Relay Driver	TO-92	ZT2400	$0.75	$0.68	$0.53
MPF102	25V	10mA	JFET N-Ch VHF Amp	TO-92	ZT2262	$2.95	$2.65	$2.05
MPF106/2N5485	25V	10mA	JFET N-Ch VHF/UHF Amp	TO-92	ZT2266	$2.95	$2.65	$2.05
VN10KM	60V	300mA	FET N-Ch	TO-92	ZT2452	$4.95	$4.45	$3.45

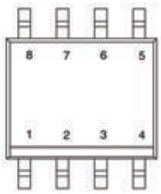
MOSFETS

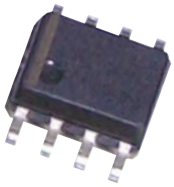
Type	Voltage	Current	Description	Pack	Cat.	Qty 1+	Qty 10+	Qty 25+
BUZ71	50V	14A	MOSFET N-Ch Power	TO-220	ZT2225	$4.95	$4.45	$3.45
IRF9540N	100V	23A	MOSFET P-Ch Power	TO-220	ZT2467	$5.95	$5.25	$4.15
IRF1405N	55V	169A	MOSFET N-Ch Automotive	TO-220	ZT2468	$5.95	$5.25	$4.15
IRF540N	100V	33A	MOSFET N-Ch Power	TO-220	ZT2466	$5.95	$5.25	$4.15
ST16NE06/ STP60NF06	60V	16A	MOSFET N-Ch Power	TO-220	ZT2277	$2.95	$2.60	$2.00
BUK456-60	60V	60A	MOSFET N-Ch Power	TO-220	ZT2450	$9.95	$8.75	$6.75
SUP53P06-20	60V	53A	MOSFET P-Ch	TO-220	ZT2464	$5.95	$5.25	$4.15

See our range of Heatsink on page A170

Dual N-Channel 30V MOSFET - Si4944DY

This handy dual N-channel MOSFET can be used in many projects such as DC-DC conversion and switching circuits. They have extremely low on-resistance (rDS(on) 0.016Ω VGS = 4.5V) and fast switching/low capacitance. They are very useful as analog switches as well as the traditional uses for MOSFETs eg, relay driving, LED driving, etc.





SMD

type	case	Cat.	Qty 1+	Qty 10+	Qty 25+
Si4944DY	SOIC8	ZK8821	$5.50	$4.90	$3.75

TRANSDUCERS

Ultrasonic Transducer

- Compact and lightweight
- High sound pressure level
- Low power consumption
- High sensitivity, reliabilty & stability
- Transmitter & receiver in one unit

Application:
- Parking sensors
- Proximity sensor
- Motion detector
- Automatic doors
- Intruder alarm
- Water level meter

Specifications	AU5550		
Frequency	40kHz	Max Input Voltage	140V
Transmitting Sound Pressure	>105dB	Operating Temperature	-40°C to +85°C
Receiving Sensitivity	>-74dB		

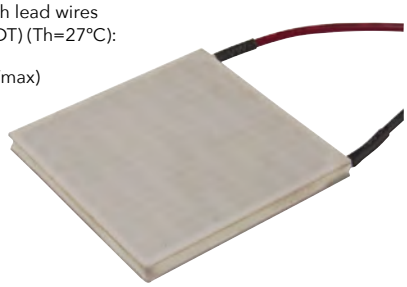
Cat.	Qty 1+	Qty 5+	Qty 10+
AU5550	$9.95	$8.95	$7.95

PELTIER MODULES

Thermoelectric (Peltier) Modules

These are a solid-state devices which operate as a heat pump to transfer heat utilising the Peltier effect. Suitable for cooling or heating applications up to 100°C.

- Measures: 40 x 40 mm with lead wires
- Temperature differential (DT) (Th=27°C): >=68°C
- Optimum input voltage (Vmax) (Th=27°C): 15V



Specifications	ZP9100	ZP9102	ZP9104
Optimum Input Current (Imax) (Th=27°C)	4A	6A	8A
Maximum Cooling Power (Qmax)	33.4W	51.4W	68.09W

Cooling Power	Cat.	Qty 1+	Qty 10+	Qty 25+
33.4W	ZP9100	$21.95	$19.45	$17.45
51.4W	ZP9102	$24.95	$22.45	$19.95
68.09W	ZP9104	$27.95	$24.95	$21.95

Tech talk

CAPACITOR TYPES

CERAMIC:
These offer low cost and high capacitance in a small physical size. Normally there are two types, the 'High Stability Temperature Compensating' type and the 'Bypass and Coupling' type. The former for use in resonant circuit and filter applications, with a value largely independent of voltage and frequency. The latter is for use in less critical applications, as they are less stable and have non-linear temperature characteristics and are somewhat voltage dependent.

POLYESTER:
This type offers good stability, a large range of values at low cost, and is the most widely used capacitor for general purpose.
Polycarbonate:
These have a low temperature coefficient, low dielectric loss at high frequency and excellent temperature stability characteristics.

POLYSTYRENE:
These offer tight tolerance and are highly stable; making them suitable for very stable tuned circuits and oscillators.

POLYPROPYLENE:
This type has a very low dielectric loss and are particularly suitable in audio circuits and sample-and-hold circuits.

MYLAR:
This is the Du Pont tradename for polyester. They usually have an aluminium film deposit on the dielectric and are called "metallised polyester".

Capacitor Quick Reference Chart

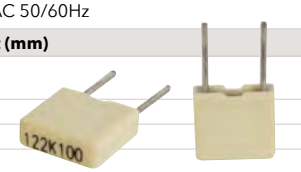
Use	Capacitor Type	Cat.	Page
RF	Ceramic	RC-5XXX	A207
AUDIO	MKT	RM-7XXX	A207
SMPS	Low ESR	RE-63XX	A209
PSU	Electrolytic	RE-60XX	A208
CROSSOVER	Poly/Electrolytic	RY-69XX	A208
MOTOR	Motor Start	RU-66XX	A208

CAPACITORS

100VDC MKT Miniature Polyester

- Rated voltage: 100VDC working, 40VAC 50/60Hz

Capacitance	Width	Depth	Height (mm)
0.001 - 0.08µF	7.5	2.5	6.5
0.10 - 0.22µF	7.5	3.2	8
0.27 - 0.56µF	7.5	5	8
0.68µF	7.5	6	9.6
1.5µF	26	7	16



Value (µF)	(nF)	Pitch (mm)	Cat.	Qty 1+	Qty 25+	Qty 100+
0.0010	1.0	5	RM7010	$0.35	$0.24	$0.21
0.0012	1.2	5	RM7012	$0.35	$0.24	$0.21
0.0015	1.5	5	RM7015	$0.35	$0.24	$0.21
0.0022	2.2	5	RM7022	$0.35	$0.24	$0.21
0.0027	2.7	5	RM7027	$0.35	$0.24	$0.21
0.0033	3.3	5	RM7033	$0.35	$0.24	$0.21
0.0039	3.9	5	RM7039	$0.35	$0.24	$0.21
0.0047	4.7	5	RM7047	$0.35	$0.24	$0.21
0.0068	6.8	5	RM7055	$0.35	$0.24	$0.21
0.010	10	5	RM7065	$0.35	$0.24	$0.21
0.012	12	5	RM7070	$0.35	$0.24	$0.21
0.015	15	5	RM7075	$0.35	$0.24	$0.21
0.018	18	5	RM7080	$0.35	$0.24	$0.21
0.022	22	5	RM7085	$0.35	$0.24	$0.21
0.033	33	5	RM7095	$0.35	$0.24	$0.21
0.039	39	5	RM7100	$0.35	$0.24	$0.21
0.047	47	5	RM7105	$0.35	$0.24	$0.21
0.056	56	5	RM7110	$0.35	$0.24	$0.21
0.068	68	5	RM7115	$0.35	$0.24	$0.21
0.082	82	5	RM7120	$0.40	$0.27	$0.24
0.10	100	5	RM7125	$0.40	$0.27	$0.24
0.12	120	5	RM7130	$0.40	$0.27	$0.24
0.15	150	5	RM7135	$0.45	$0.30	$0.25
0.18	180	5	RM7140	$0.45	$0.30	$0.25
0.22	220	5	RM7145	$0.45	$0.30	$0.25
0.27	270	5	RM7150	$0.65	$0.45	$0.37
0.33	330	5	RM7153	$0.65	$0.45	$0.37
0.47	470	5	RM7165	$0.65	$0.45	$0.37
0.56	560	5	RM7166	$0.85	$0.57	$0.50
0.68	680	5	RM7168	$0.85	$0.57	$0.50
1.00	1000	5	RM7170	$0.95	$0.65	$0.55
1.50	1500	23	RM7172	$1.25	$0.85	$0.75

250VDC Metallised Polypropylene

Metallised polypropylene dielectric offers stable capacitance over a wide temperature range. This, and the relatively high capacitance for size makes them ideal for high quality loudspeaker crossover networks. Naturally, they are also suitable for other applications where a stable, non polarised capacitive component is required.

- Ideal for speaker crossovers
- Axial

High Quality

Value (µF)	W x D x H (mm)	Cat.	Qty 1+	Qty 5+	Qty 10+
1.0	25 x 16 x 8	RY6950	$3.95	$2.75	$2.30
1.5	29 x 17 x 10	RY6951	$4.95	$3.95	$3.45
2.2	32 x 19 x 10	RY6952	$5.65	$4.60	$4.15
3.3	32 x 22 x 13	RY6953	$7.95	$6.25	$5.50
4.7	32 x 22 x 15	RY6954	$12.50	$8.75	$7.75
5.6	46 x 20 x 12	RY6955	$13.50	$9.75	$8.75
6.8	46 x 22 x 14	RY6956	$14.50	$11.35	$10.35
8.2	46 x 23 x 16	RY6957	$17.95	$13.35	$11.70
10.0	56 x 29 x 21	RY6958	$18.95	$14.95	$13.35

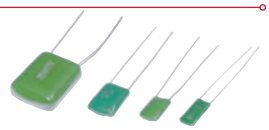
250VAC - Metallised Polypropylene - X2 Style

- Voltage rating: 275/250VAC
- Capacitance tolerance: ±10% std ±5%
- Operating temperature: -40°C to 85°C

Value (µF)	(nF)	Pitch (mm)	Cat.	Qty 1+	Qty 25+	Qty 100+
0.010	10	10	RG5230	$0.95	$0.65	$0.55
0.022	22	10	RG5232	$0.95	$0.65	$0.55
0.047	47	15	RG5234	$0.95	$0.65	$0.55
0.10	100	15	RG5236	$1.25	$0.85	$0.75
0.22	220	22.5	RG5238	$1.35	$0.90	$0.80
0.47	470	22.5	RG5240	$3.75	$2.60	$2.20
1.0	1000	27.5	RG5248	$4.25	$2.90	$2.45

Greencaps Polyester or Mylar

- Supplied loose
- Operating temperature: -40°C to +85°C



100VDC

Value (µF)	(nF)	Pitch (mm)	Cat.	Qty 1+	Qty 25+	Qty 100+
0.0010	1.0	4	RG5010	$0.30	$0.21	$0.18
0.0012	1.2	4	RG5012	$0.30	$0.21	$0.18
0.0015	1.5	4	RG5015	$0.30	$0.21	$0.18
0.0018	1.8	4	RG5018	$0.30	$0.21	$0.18
0.0022	2.2	4	RG5022	$0.30	$0.21	$0.18
0.0027	2.7	4	RG5027	$0.30	$0.21	$0.18
0.0033	3.3	4	RG5033	$0.30	$0.21	$0.18
0.0039	3.9	4	RG5039	$0.30	$0.21	$0.18
0.0047	4.7	4	RG5047	$0.30	$0.21	$0.18
0.0056	5.6	4	RG5050	$0.30	$0.21	$0.18
0.0068	6.8	4	RG5055	$0.30	$0.21	$0.18
0.0082	8.2	4	RG5060	$0.30	$0.21	$0.18
0.010	10	4	RG5065	$0.30	$0.21	$0.18
0.012	12	4	RG5070	$0.30	$0.21	$0.18
0.015	15	5	RG5075	$0.30	$0.21	$0.18
0.018	18	5	RG5080	$0.30	$0.21	$0.18
0.022	22	5	RG5085	$0.30	$0.21	$0.18
0.027	27	5	RG5090	$0.30	$0.21	$0.18
0.033	33	5	RG5095	$0.30	$0.21	$0.18
0.039	39	5	RG5100	$0.30	$0.21	$0.18
0.047	47	5	RG5105	$0.30	$0.21	$0.18
0.056	56	6	RG5110	$0.30	$0.21	$0.18
0.068	68	6.5	RG5115	$0.30	$0.21	$0.18
0.082	82	6.5	RG5120	$0.30	$0.21	$0.18
0.10	100	7	RG5125	$0.30	$0.21	$0.18
0.12	120	7	RG5130	$0.30	$0.21	$0.18
0.15	150	7.5	RG5135	$0.30	$0.21	$0.18
0.18	180	7.5	RG5140	$0.30	$0.21	$0.18
0.22	220	7.5	RG5145	$0.30	$0.21	$0.18
0.27	270	7.5	RG5150	$0.42	$0.29	$0.25
0.33	330	8	RG5153	$0.42	$0.29	$0.25

100VDC Large Values

Suitable for speaker crossovers, etc.

Value (µF)	(nF)	Pitch (mm)	Cat.	Qty 1+	Qty 25+	Qty 100+
0.47	470	11	RG5165	$0.40	$0.28	$0.24
0.56	560	15	RG5166	$0.60	$0.42	$0.36
0.68	680	11	RG5168	$1.75	$1.20	$1.05
0.82	820	15	RG5169	$1.75	$1.20	$1.05
1.00	1000	11	RG5170	$2.25	$1.55	$1.35
1.50	1500	20	RG5172	$3.45	$2.35	$2.00
2.20	2200	11	RG5175	$3.45	$2.35	$2.00
3.30	3300	21	RG5180	$3.45	$2.35	$2.00

630VDC

Value (µF)	(nF)	Pitch (mm)	Cat.	Qty 1+	Qty 25+	Qty 100+
0.010	10	9	RG5201	$0.60	$0.42	$0.36
0.022	22	9	RG5202	$0.80	$0.56	$0.48
0.033	33	14	RG5203	$0.95	$0.65	$0.55
0.047	47	10	RG5204	$0.95	$0.65	$0.55
0.047	47	14	RG5205	$0.95	$0.65	$0.55
0.10	100	14	RG5210	$1.40	$0.95	$0.80
0.22	220	14	RG5222	$1.40	$0.95	$0.80
0.47	470	23	RG5247	$1.95	$1.35	$1.15

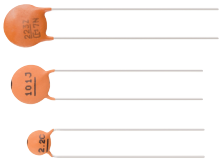
50VDC Monolithic

Lead spacing 5mm, low impedance

Value(µF)	Pkt	Cat.	Qty 1+	Qty 25+	Qty 100+
0.01	each	RC5480	$0.35	$0.25	$0.21
0.022	each	RC5482	$0.35	$0.25	$0.21
0.047	each	RC5486	$0.35	$0.25	$0.21
0.10	each	RC5490	$0.35	$0.25	$0.21
0.10	100	RC5496	$9.95	$6.95	$5.95
0.22	each	RC5494	$0.38	$0.27	$0.23
0.47	each	RC5498	$0.75	$0.53	$0.45
1.0	each	RC5499	$0.75	$0.53	$0.45

Capacitors CONTINUED

50V Ceramic



1pF - 10pF ±1/4pF
12pF - 100pF ±5%
120pF - 0.022µF ±10% (Y5P)
0.033µF - 0.1µF ±20% (Y5U)
• 5mm lead spacing • Low inductance

1.0PF - 8200PF

Value (pF)	Cat. (Pkt 2)	Value (pF)	Cat. (Pkt 2)
1.0	RC5300	56	RC5321
1.2	RC5301	68	RC5322
1.5	RC5302	82	RC5323
1.8	RC5303	100	RC5324
2.2	RC5304	120	RC5325
2.7	RC5305	150	RC5326
3.3	RC5306	180	RC5327
3.9	RC5307	220	RC5328
4.7	RC5308	270	RC5329
5.6	RC5309	330	RC5330
6.8	RC5310	390	RC5331
8.2	RC5311	470	RC5332
10	RC5312	560	RC5333
12	RC5313	680	RC5334
15	RC5314	820	RC5335
18	RC5315	1000	RC5336
22	RC5316	2200	RC5340
27	RC5317	3300	RC5342
33	RC5318	4700	RC5344
39	RC5319	5600	RC5345
47	RC5320	6800	RC5346
		8200	RC5347

Pkt 2	Qty 1+	Qty 25+	Qty 100+
All above Cat No. (Pkt 2) 1pF - 8200pF	$0.38	$0.27	$0.23

0.01µF - 0.1µF

Value (µF)	Cat. (Pkt 2)	Value (µF)	Cat. (Pkt 2)
0.01µF	RC5348	0.047µF	RC5356
0.022µF	RC5352	0.1µF	RC5360
0.033µF	RC5354		

Pkt 2	Qty 1+	Qty 25+	Qty 100+
All above Cat No. (Pkt 2) 0.01µF - 0.1µF	$0.46	$0.32	$0.28

0.22µF / 220NF LEAD SPACING 5MM

	Cat.	Qty 1+	Qty 25+	Qty 100+
(Each)	RC5364	$0.68	$0.48	$0.41

50VDC Bi-Polar RB Electrolytic - 85˚C

Value(µF)	Size (mm)	Pitch (mm)	Ripple (ma)	Cat.	Qty 1+	Qty 25+	Qty 100+
1.0	5 x 11	2.0	8	RY6802	$0.55	$0.39	$0.33
2.2	5 x 11	2.0	20	RY6804	$0.55	$0.39	$0.33
3.3	5 x 11	2.0	25	RY6805	$0.55	$0.39	$0.33
4.7	5 x 11	2.0	30	RY6806	$0.55	$0.39	$0.33
6.8	5 x 11	2.0	40	RY6808	$0.55	$0.39	$0.33
10	6.3 x 11	2.5	48	RY6810	$0.55	$0.39	$0.33
22	8 x 11	3.5	82	RY6816	$0.95	$0.65	$0.55
33	8 x 11	3.5	98	RY6818	$1.15	$0.80	$0.65
47	8 x 11	3.5	140	RY6820	$1.65	$1.15	$0.95
100	10 x 20	5.0	245	RY6825	$2.95	$2.00	$1.75

3KV HIGH VOLTAGE CERAMIC

Value 0.01µF.

Value(µF)	Cat.	Qty 1+	Qty 25+	Qty 100+
0.01	RC5380	$2.95	$2.00	$1.75

CAPACITORS - TAG TANTALUM

Tag Tantalum Thru-Hole

• Resin dipped case
• Price per each
• 5mm lead spacing

16V

Value(µF)	Pitch (mm)	Cat.	Qty 1+	Qty 25+	Qty 100+
4.7	5.0	RZ6636	$0.75	$0.53	$0.45
6.8	5.0	RZ6642	$1.15	$0.80	$0.65
10	5.0	RZ6648	$1.15	$0.80	$0.65
15	5.0	RZ6657	$1.15	$0.80	$0.65
22	5.0	RZ6658	$1.15	$0.80	$0.65
33	5.0	RZ6665	$2.65	$1.85	$1.55
47	5.0	RZ6670	$2.65	$1.85	$1.55

25V

Value(µF)	Pitch (mm)	Cat.	Qty 1+	Qty 25+	Qty 100+
1.0	5.0	RZ6627	$0.75	$0.53	$0.45
10	5.0	RZ6650	$1.15	$0.80	$0.65

35V

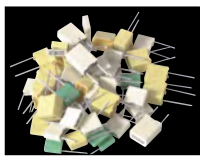
Value(µF)	Pitch (mm)	Cat.	Qty 1+	Qty 25+	Qty 100+
0.10	5.0	RZ6620	$0.75	$0.53	$0.45
0.22	5.0	RZ6622	$0.75	$0.53	$0.45
0.33	5.0	RZ6624	$0.75	$0.53	$0.45
0.47	5.0	RZ6626	$0.75	$0.53	$0.45
1.0	5.0	RZ6628	$0.75	$0.53	$0.45
1.5	5.0	RZ6630	$0.75	$0.53	$0.45
2.2	5.0	RZ6632	$0.75	$0.53	$0.45
4.7	5.0	RZ6640	$0.95	$0.65	$0.55
6.8	5.0	RZ6645	$1.15	$0.80	$0.65
10	5.0	RZ6655	$1.15	$0.80	$0.65

PROTOTYPE PACKS - CAPACITORS

• Ideal for prototyping

CERAMIC - RC5399

100V GREENPACK - RG5199



MKT - RM7190

ELECTROLYTIC - RE6250

Value	Pack	Cat.	Qty 1+	Qty 25+	Qty 100+
10pF - 100nF	60	RC5399	$9.95	$6.75	$5.75
0.001µF - 0.22µF	60	RG5199	$14.95	$10.45	$8.95
0.001µF - 0.47µF	50	RM7190	$16.95	$11.85	$10.15
1µF - 470µF	55	RE6250	$13.50	$8.95	$7.75

MKT Capacitor Bargain Pack - Assorted Types

A vast array of over 90 high quality WIMA brand X2 type and other capacitors. No two bags are the same. Excellent value for money.

Limited stock.

Note: Pack contents may vary to the one shown.

	Cat.	Qty 1+
	XB9008	$24.95

Capacitors CONTINUED

PC Mount RB Electrolytic - 105°C

Our range of RB PC mount electrolytics up to 63 Volt are 105°C rated. This makes for more reliable service. Consider this when making price comparisons with competitors' 85°C products.

105°C High Temperature

10V

Value (µF)	Pitch (mm)	Ø x H (mm)	Ripple Current mA	Cat.	Qty 1+	Qty 25+	Qty 100+
220	5.0	6.5 x 11	180	RE6157	$0.35	$0.25	$0.21

16V

Value (µF)	Pitch (mm)	Ø x H (mm)	Ripple Current mA	Cat.	Qty 1+	Qty 25+	Qty 100+
10	2.0	5 x 11	45	RE6066	$0.30	$0.21	$0.18
22	2.0	5 x 11	60	RE6079	$0.30	$0.21	$0.18
47	2.0	5 x 11	100	RE6100	$0.35	$0.25	$0.21
100	2.5	6.3 x 11	170	RE6130	$0.35	$0.25	$0.21
220	3.5	8 x 12	280	RE6158	$0.40	$0.28	$0.24
330	3.5	8 x 12	360	RE6188	$0.50	$0.35	$0.30
470	3.5	8 x 16	460	RE6194	$0.60	$0.42	$0.36
1000	5.0	10 x 16	760	RE6220	$0.95	$0.65	$0.55
2200	5.0	13 x 23	1250	RE6238	$1.15	$0.80	$0.65
4700	7.5	16 x 26	1960	RE6243	$2.25	$1.55	$1.35

25V

Value (µF)	Pitch (mm)	Ø x H (mm)	Ripple Current mA	Cat.	Qty 1+	Qty 25+	Qty 100+
10	2.0	5 x 11	45	RE6070	$0.35	$0.25	$0.21
22	2.0	5 x 11	70	RE6090	$0.35	$0.25	$0.21
33	2.0	5 x 11	95	RE6095	$0.35	$0.25	$0.21
47	2.5	5 x 11	120	RE6110	$0.35	$0.25	$0.21
100	3.5	8 x 12	180	RE6140	$0.45	$0.32	$0.27
220	5.0	10 x 13	320	RE6160	$0.45	$0.32	$0.27
330	5.0	10 x 16	420	RE6190	$0.70	$0.49	$0.42
470	5.0	10 x 16	540	RE6195	$0.75	$0.53	$0.45
1000	5.0	13 x 20	900	RE6230	$1.15	$0.80	$0.65
2200	5.0	13 x 26	1460	RE6240	$1.50	$1.05	$0.90
4700	7.5	16 x 35	2150	RE6244	$3.45	$2.35	$2.00

50V

Value (µF)	Pitch (mm)	Ø x H (mm)	Ripple Current mA	Cat.	Qty 1+	Qty 25+	Qty 100+
4µ7	2.0	5 x 11	35	RE6058	$0.35	$0.25	$0.21
220	5.0	10 x 17	430	RE6180	$1.20	$0.80	$0.70
2200	7.5	16 x 35	1900	RE6241	$3.25	$2.25	$1.90
4700	10	22 x 40	2280	RE6245	$5.75	$3.95	$3.40

63V

Value (µF)	Pitch (mm)	Ø x H (mm)	Ripple Current mA	Cat.	Qty 1+	Qty 25+	Qty 100+
µ47	2.0	5 x 11	8	RE6020	$0.30	$0.21	$0.18
1µ	2.0	5 x 11	15	RE6032	$0.30	$0.21	$0.18
2µ2	2.0	5 x 11	22	RE6042	$0.30	$0.21	$0.18
3µ3	2.0	5 x 11	30	RE6045	$0.30	$0.21	$0.18
4µ7	2.0	5 x 11	40	RE6060	$0.35	$0.25	$0.21
10	2.0	5 x 11	65	RE6075	$0.35	$0.25	$0.21
22	2.5	6.3 x 11.5	100	RE6080	$0.35	$0.25	$0.21
47	3.5	8 x 12	180	RE6122	$0.45	$0.32	$0.27
100	5.0	8 x 16	280	RE6150	$0.95	$0.65	$0.55
470	5.0	13 x 25	880	RE6210	$1.65	$1.15	$0.95
1000	7.5	16 x 30	1400	RE6236	$2.45	$1.70	$1.45

PC Mount RB Electrolytic - 85˚C

35V

Value (µF)	Pitch (mm)	Ø x H (mm)	ripple current ma	Cat.	Qty 1+	Qty 25+	Qty 100+
22	5.0	5 x 100	80	RE6092	$0.35	$0.25	$0.21

Find Out More In Store

Our staff offer friendly and helpful service. We're here to help.

100VDC Non-Polarised Crossover Type - 85˚C

This range is ideal for crossover networks and will handle high power but are suitable for other applications of course. The range includes large values - up to 400µF, (required for subwoofers). All capacitors have RT or axial leads.

Value(µF)	Ø x L (mm)	Cat.	Qty 1+	Qty 5+	Qty 10+
1	8 x 17	RY6901	$2.10	$1.85	$1.65
2.2	8 x 17	RY6902	$2.10	$1.85	$1.65
3.3	8 x 19	RY6903	$2.20	$1.95	$1.75
4.7	8 x 19	RY6904	$2.20	$1.95	$1.75
6.8	10 x 19	RY6906	$2.50	$2.21	$2.05
10	10 x 19	RY6908	$2.50	$2.21	$2.05
15	10 x 19	RY6910	$2.65	$2.35	$2.07
22	10 x 24	RY6912	$3.10	$2.75	$2.45
33	13 x 27	RY6914	$3.65	$3.25	$2.90
47	13 x 32	RY6916	$4.85	$4.30	$3.85
68	16 x 34	RY6918	$5.50	$4.90	$4.30
100	16 x 34	RY6920	$7.45	$6.65	$5.90
150	18 x 38	RY6924	$11.95	$10.70	$9.50
220	18 x 44	RY6928	$13.95	$12.35	$10.95
300	22 x 44	RY6932	$18.95	$16.95	$14.95
400	22 x 44	RY6936	$21.95	$19.70	$17.35

2.5V Super Capacitors - 22 & 55 Farad

These specially engineered capacitors are actually a high-tech energy storage device - not the standard capacitors which they look identical to. Using a combination manufacturing process where nano surface structured carbon is combined with organic electrolytes, this technique enables these capacitors to store 1,000 times the energy of a standard electrolytic capacitor. The main applications are energy storage at a circuit board level replacing the bulkier secondary batteries which are currently used. Essentially anywhere high energy storage is needed.

- 7.5mm lead spacing
- Long lifetime (10 years)
- High cycle life (over 500,000 cycles)

RE6704

Value (F)	Ø x H (mm)	Cat.	Qty 1+	Qty 25+	Qty 100+
22	16 x 25	RE6702	$15.95	$10.95	$9.45
55	18 x 40	RE6704	$22.95	$15.95	$13.45

5.5V Super Capacitors - 0.047 & 1 Farad

Super capacitors are a standby power source capable of providing up to 30 days back-up voltage & current to CMOS RAMs during power failures. Never needs replacing or maintenance

- Can be soldered onto PCBs
- Can be charged at high & low current rates i.e. µA to Amps
- 5mm lead spacing

Value(F)	Ø x H (mm)	Cat.	Qty 1+	Qty 25+	Qty 100+
0.047	13 x 7.5	RU6700	$5.95	$4.15	$3.55
1.0	20 x 7.5	RU6705	$8.95	$6.25	$5.35

Motor Run Capacitors, Single Phase, Asynchronous

These capacitors are designed to replace the original capacitor that has failed. You must replace the part as the motor may simply not work, draw excessive current or have poor torque. These are suitable for motors operating at up to 400VAC and common values are offered here. Please note it is important to choose the correct value for the motor otherwise the starting torque of the motor will change. Two different packages are provided. For the higher valued capacitors it's necessary to use the different case style which provides the important AMP250A terminals and an inbuilt safety device.

RU6604 RU6606

Capacitance (µF)	W x D x H (mm)	Cat.	Qty 1+	Qty 25+	Qty 100+
6.0 400VAC	49 x 21 x 31	RU6600	$16.95	$11.70	$9.95
10 400VAC	50 x 25 x 36	RU6602	$16.95	$11.70	$9.95
12 400VAC	50 x 25 x 40	RU6604	$16.95	$11.70	$9.95
20 450VAC	45 x 75	RU6606	$16.95	$11.70	$9.95
30 450VAC	50 x 75	RU6608	$16.95	$11.70	$9.95

450V High Voltage RB Electrolytic

- 85°C rated

**RE6156 is 400V rated.*

High Voltage

Value (µF)	Pitch (mm)	Ø x H (mm)	Ripple Current (mA)	Cat.	Qty 1+	Qty 25+	Qty 100+
1	3.5	10 x 14.5	12	RE6034	$1.75	$1.20	$1.05
2µ2	5.0	10 x 17	28	RE6044	$1.75	$1.20	$1.05
4µ7	5.0	10 x 20.5	48	RE6062	$2.50	$1.75	$1.50
10	5.0	13 x 21.5	75	RE6078	$3.50	$2.45	$2.05
47	8.0	17.5 x 36	285	RE6125	$7.50	$5.25	$4.45
100	13	18x42.5	521	RE6156*	$7.95	$5.50	$4.75

Capacitors CONTINUED

Low Impedance* or ESR[1] Capacitors

Stable, low impedance characteristics. High ripple current** Low DC leakage current Extended life - high reliability withstanding 2,000 to 4,000 hours load life at 105°C

Radial leads on standard pitch
*Impedance: max at 20°C 100kHz
**Ripple current measured at 105°C 100kHz.
[1]Equivalent Series Resistance

10VDC

Value	Ø x H (mm)	Impedance Ω*	Ripple Current RMS	Cat.	Qty 1+	Qty 25+	Qty 100+
220µF	6.3 x 12	0.2	340mA	RE6300	$0.42	$0.29	$0.25
470µF	8 x 11	0.13	640mA	RE6302	$0.50	$0.35	$0.30
1000µF	10 x 16	0.06	1210mA	RE6304	$0.85	$0.60	$0.51
2200µF	10 x 16	0.05	1900mA	RE6306	$1.25	$0.85	$0.75
4700µF	13 x 24	0.028	2552mA	RE6308	$2.25	$1.55	$1.35

16VDC

Value	Ø x H (mm)	Impedance Ω*	Ripple Current RMS	Cat.	Qty 1+	Qty 25+	Qty 100+
100µF	6.3 x 11	0.22	340mA	RE6310	$0.42	$0.29	$0.25
220µF	8 x 11	0.13	640mA	RE6312	$0.46	$0.32	$0.28
470µF	8 x 16	0.087	840mA	RE6314	$0.85	$0.60	$0.51
1000µF	10 x 20	0.046	1400mA	RE6316	$1.25	$0.85	$0.75
2200µF	16 x 25	0.035	2210mA	RE6318	$1.65	$1.15	$0.95
4700µF	16 x 32	0.022	3029mA	RE6320	$2.95	$2.00	$1.75

25VDC

Value	Ø x H (mm)	Impedance Ω*	Ripple current RMS	Cat.	Qty 1+	Qty 25+	Qty 100+
100µF	8 x 11	0.22	340mA	RE6322	$0.50	$0.35	$0.30
220µF	8 x 12	0.13	640mA	RE6324	$0.50	$0.35	$0.30
470µF	10 x 16	0.060	1210mA	RE6326	$0.95	$0.65	$0.55
1000µF	13 x 20	0.035	1900mA	RE6328	$1.50	$1.05	$0.90
2200µF	16 x 25	0.022	2743mA	RE6330	$1.85	$1.25	$1.10

35VDC

Value	Ø x H (mm)	Impedance Ω*	Ripple Current RMS	Cat.	Qty 1+	Qty 25+	Qty 100+
47µF	6.3 x 11	0.22	340mA	RE6332	$0.42	$0.29	$0.25
100µF	8 x 11	0.13	640mA	RE6334	$0.50	$0.35	$0.30
220µF	10 x 16	0.09	840mA	RE6336	$0.80	$0.56	$0.48
470µF	10 x 20	0.046	1400mA	RE6338	$1.40	$0.95	$0.80
1000µF	16 x 25	0.035	2552mA	RE6340	$1.95	$1.35	$1.15

63VDC

Value	Ø x H (mm)	Impedance Ω*	Ripple Current RMS	Cat.	Qty 1+	Qty 25+	Qty 100+
22µF	6.3 x 11	0.70	180mA	RE6342	$0.42	$0.29	$0.25
47µF	8 x 11.5	0.30	295mA	RE6344	$0.50	$0.35	$0.30
100µF	10 x 20	0.12	760mA	RE6346	$0.95	$0.65	$0.55
220µF	10 x 20	0.060	1220mA	RE6348	$1.25	$0.85	$0.75
470µF	16 x 20	0.043	1690mA	RE6350	$1.75	$1.20	$1.05

LOW ESR CAPACITORS

ESR stands for Equivalent Series Resistance.

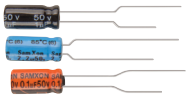
Capacitors, like all electronic components, are never just pure capacitance; there are always inherent series resistances due to connecting leads and internal structures. Taken all together, these resistances are represented as a single ESR.

Electrolytic capacitors can have a significant ESR. Typically, an electrolytic capacitor is used as energy stored to 'hold up' a voltage rail between pulses of current from a rectifier. each current pulse charging the capacitor causes power losses in the series resistance, both heating up the capacitor and increasing the ripple voltage.

Further losses occur when the capacitor discharges into load.

For mains frequency power supplies, this may not be such a problem. However, for switching power supplies that run at 10s of kilohertz, a Low ESR capacitor reduces heating losses and provides the best filtering.

RBLL LOW Leakage Electrolytic



- 85°C rated. Leakage characteristic similar to tantalum caps, but at a lower price

25V

Value	Lead Spacing	Size Ø X H	Cat.	Qty 1+	Qty 25+	Qty 100+
22µF	2.5mm	6.3 x 11mm	RL6430	$0.65	$0.46	$0.39
33µF	2.5mm	6.3 x 11mm	RL6432	$0.65	$0.46	$0.39
47µF	3.5mm	8 x 12mm	RL6434	$0.95	$0.65	$0.55
100µF	3.5mm	8 x 12mm	RL6436	$1.10	$0.75	$0.65

50V

Value	Lead Spacing	Size Ø X H	Cat.	Qty 1+	Qty 25+	Qty 100+
0.1µF	2.0mm	5 x 11mm	RL6402	$0.48	$0.34	$0.29
0.22µF	2.0mm	5 x 11mm	RL6406	$0.48	$0.34	$0.29
0.33µF	2.0mm	5 x 11mm	RL6408	$0.48	$0.34	$0.29
0.47µF	2.0mm	5 x 11mm	RL6410	$0.48	$0.34	$0.29
0.68µF	2.0mm	5 x 11mm	RL6412	$0.48	$0.34	$0.29
1.0µF	2.0mm	5 x 11mm	RL6414	$0.48	$0.34	$0.29
1.5µF	2.0mm	5 x 11mm	RL6418	$0.48	$0.34	$0.29
2.2µF	2.0mm	5 x 11mm	RL6420	$0.48	$0.34	$0.29
3.3µF	2.0mm	5 x 11mm	RL6422	$0.48	$0.34	$0.29
4.7µF	2.0mm	5 x 11mm	RL6424	$0.48	$0.34	$0.29
10µF	2.5mm	6.3 x 11mm	RL6428	$0.67	$0.47	$0.40

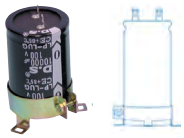
RP Electrolytic

This style of capacitor is distinguished because, whilst bulky, does not need a chassis clamp. Fixing is by the stout lead wires. While soldered retention is generally adequate. For applications where vibration is an issue a dab of silicone under the component is recommended. 85°C rated

40V

Value	Ripple Current	Size	Cat.	Qty 1+	Qty 25+	Qty 100+
5600µF	2.4A	26 x 42mm	RU6709	$8.95	$6.25	$5.25
10000µF	2.7A	26 x 51mm	RU6720	$19.95	$13.95	$11.95

RG Chassis Mount Electrolytic

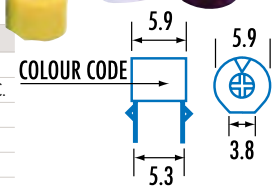


- 85°C rated

All supplied with mounting bracket. Height and diameter column excludes lugs - 8mm.

Value	Ripple Current	Size Ø x H	Volt	Cat.	Qty 1+	Qty 25+	Qty 100+
4000µF	4.6A	35 x 51mm	75V	RU6708	$11.95	$8.25	$6.95
8000µF	3.47A	35 x 76mm	80V	RU6710	$14.95	$10.35	$8.75
10000µF	8.1A	50 x 80mm	100V	RU6712	$34.95	$23.95	$20.95

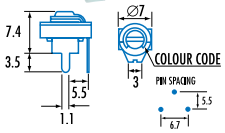
TRIMMERS



Specifications	All
Working Voltage	50V DC.
Insulation Resistance	>104MΩ min at 250VDC.
Operating Temp	-30°C to +85°C
Withstand Voltage	110VDC
Turning Torque	20 to 200gr/cm

Cap(pF)	Temp Co-efficient	Colour	Cat.	Qty 1+	Qty 25+	Qty 100+
3-10	N470	White	RV5714	$1.85	$1.65	$1.25
6.2-30	N750	Green	RV5716	$1.85	$1.65	$1.25
6.8-40	N1200	Yellow	RV5718	$1.85	$1.65	$1.25
9.8-50	N1200	Brown	RV5720	$1.85	$1.65	$1.25

8.5-100pF Ceramic Trimmer



Specifications	RV5722
Working Voltage	225VDC.
Insulation Resistance	>104MΩ min at 250VDC.
Withstand Voltage 500VDC.	500VDC
Temp coefficient	N2200
Colour	Purple

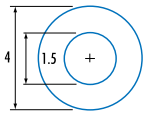
Capacitance(pF)	Voltage	Cat.	Qty 1+	Qty 25+	Qty 100+
8.5-100	225VDC	RV5722	$2.95	$2.00	$1.75

FERRITES

Ferrite Bead

These small tubes can be threaded on to a wire to provide RF or interference suppression at frequencies higher than the normal operating range of the equipment to be protected.

Product may vary from image

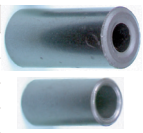


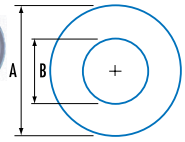
Length(mm)	Pkt	Cat.	Qty 1+	Qty 25+	Qty 100+
5.0	6	LF1250	$4.95	$3.45	$2.95

Ferrite Suppression Sleeves

Similar to suppression beads (see above) but longer for greater attenuation.

Cat.	Typical Impedance	
	(Z)@25MHz	(Z)@100MHz
LF1256	52	66
LF1258	130	200
LF1260	161	255



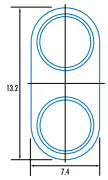


Length (mm)	A (mm)	B (mm)	Pkt	Cat.	Qty 1+	Qty 25+	Qty 100+
16	8.0	5.6	6	LF1256	$6.95	$4.85	$4.15
20	12	5.6	6	LF1258	$8.95	$6.25	$5.35
29	16	8.0	6	LF1260	$9.95	$6.95	$5.95

Standard Transformer (Balun) Cores

Generally used in VHF/UHF circuits for balanced or unbalanced line matching. Can also be used as a lossy choke, etc.

- Material: Type M7
- Insertion Loss: 40-220MHz 0.5dB
  > 220MHz 1.0dB



Length(mm)	Pkt	Cat.	Qty 1+	Qty 25+	Qty 100+
6.0	2	LF1222	$3.50	$2.45	$2.10
14	2	LF1220	$3.50	$2.45	$2.10

Ferrite Flat Bar

- Short and compact
- Ideal for MW tuned circuits
- Frequency: 0.5 - 10MHz
- Also suitable for suppression work

L x W x D (mm)	Cat.	Qty 1+	Qty 25+	Qty 100+
40 x 12 x 5	LF1016	$3.95	$2.75	$2.35

Ferrite Rounds

- 9mm diameter
- Material S-1
- Ideal for MW tuned circuits or suppression work

Ø x W (mm)	Cat.	Qty 1+	Qty 25+	Qty 100+
9 x 100	LF1010	$2.95	$2.05	$1.75
9 x 180	LF1012	$6.95	$4.85	$4.15

Ferrite Rod With Coil

Small ferrite rod complete with pre-wound standard broadcast band coil. Ideally suitable to our 60-160pF mini tuning capacitor.

L x W x D (mm)	Cat.	Qty 1+	Qty 25+	Qty 100+
55 x 12.5 x 4.5	LF1020	$5.95	$4.15	$3.55

High Frequency Ferrite Choke

PCB mounting ferrite chokes suitable for high frequency circuits.

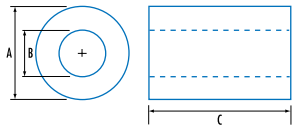
Inductance	Pitch (mm)	Cat.	Qty 1+	Qty 25+	Qty 100+
47µH	5.0	LF1100	$1.25	$0.85	$0.75
100µH	5.0	LF1102	$1.25	$0.85	$0.75
330µH	5.0	LF1106	$1.25	$0.85	$0.75
470µH	5.0	LF1108	$1.25	$0.85	$0.75

Toroid (or Ring) Cores

Toroid (both ferrite and powdered iron) are commonly used as cores for transformers or chokes mainly for RF suppression but also for any application where a compact reactive component is needed.

FERRITE MATERIAL

Drawing for both ferrite and powdered iron types. See website for more info.



MATERIAL L8 SIZE 18(A) X 10(B) X 6(C) (MM)

Pkt	Cat.	Qty 1+	Qty 25+	Qty 100+
6	L01230	$4.95	$3.45	$2.95

MATERIAL L8 SIZE 25(A) X 15(B) X 10(C) (MM)

Pkt	Cat.	Qty 1+	Qty 25+	Qty 100+
4	L01234	$6.95	$4.85	$4.15

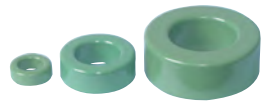
MATERIAL L15 SIZE 35(A) X 21(B) X 13(C) (MM)

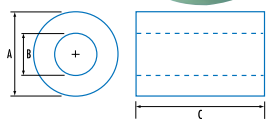
Pkt	Cat.	Qty 1+	Qty 25+	Qty 100+
2	L01238	$6.95	$4.85	$4.15

Powdered Iron Cores

These toroids are made out of compressed powdered iron and coated with a tough epoxy material. They are ideal for RF suppression of light dimmers, motor speed controllers, switch mode power supplies etc.

- Colour: Green epoxy coating
- Contact us for bulk quantity prices
- Material HY-2

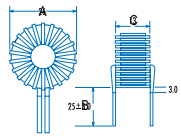




A x B x C (mm)	Pkt	Cat.	Qty 1+	Qty 25+	Qty 100+
15 x 8 x 6.5	4	L01242	$7.95	$5.55	$4.75
28 x 14 x 11	2	L01244	$9.95	$6.95	$5.95
42 x 22 x 17	1	L01246	$15.95	$10.95	$9.45

Through Hole EMC/RFI Suppression Chokes

Ideal for all wideband choke applications. Highly effective against EMI/RFI entering equipment via the mains power lines. Powdered iron core.



Specifications	LF1270	LF1272	LF1274	LF1276	LF1278
RDC mΩ	50	25	25	60	82
Wire Dia mm	1.0	0.8	1.0	1.0	1.0
Dimension A mm	26	21	24.5	28.5	31
Dimension B mm	25	10	10	10	10
Dimension C mm	13	10.5	10	13	17

Inductance (µH)	Current (A)	Cat.	Qty 1+	Qty 25+	Qty 100+
100	3A	LF1272	$4.95	$3.45	$2.95
100	5A	LF1270	$4.95	$3.45	$2.95
47	5A	LF1274	$4.95	$3.45	$2.95
220	5A	LF1276	$6.95	$4.85	$4.15
470	5A	LF1278	$7.95	$5.55	$4.75

SMS Type EMC/RFI Suppression Chokes

SMD

These popular devices complement our wire - terminated LF1270 style ferrite chokes. Good suppression of RF-EMI from DC/DC converters or any circuit which generates commutation noise etc. which needs to be suppressed to meet regulations. Supplied in bags of 10 cut from a tape reel.

LF1400

LF1402

Specifications	LF1400	LF1402
Inductance	100uH±10%	100uH±20%
Series DC Resistance (RDC)	0.99Ω max	179.6mΩ max
Rated DC Current	520mA	1.8A
Size	5.8 x 4.5mm	12 x 12 x 8mm

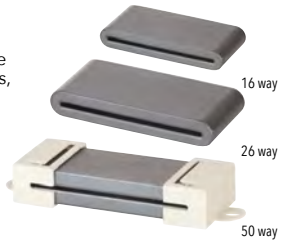
Pkt	Cat.	Qty 1+	Qty 25+	Qty 100+
10	LF1400	$8.95	$6.25	$5.35
10	LF1402	$15.95	$10.95	$9.45

Ferrites CONTINUED

Ferrite is a ceramic material with Iron Oxide - up to 50% - then with oxides of manganese and zinc or nickel. The ceramic material is mixed with these substances, pressed or extruded into useful shapes and finally fired in a furnace to their final hard, brittle state. From this there are two forms: Manganese - Zinc (Mn-Zn) ferrites which are the most common and are used for lower frequency work. They have higher permeability than the higher frequency type which have Nickel and Zinc Oxide components. The products shown in this catalogue are Mn-Zn types. For more information check our website.

Flat Cable Suppression Sleeves

These devices are designed to suppress high frequency (fast rise time) interference (radiation) to and from PC boards, printers, disk drives etc.
The ferrite makes the cable behave like a high impedance choke at high frequencies.



FOR 16 WAY RIBBON CABLE

Typical Impedance	25MHz	100MHz	Cat.	Qty 1+	Qty 25+	Qty 100+
Pkt 2	54Ω	120Ω	LF1280	$6.95	$4.85	$4.15

FOR 26 WAY RIBBON CABLE

Typical Impedance	25MHz	100MHz	Cat.	Qty 1+	Qty 25+	Qty 100+
Each	38Ω	91Ω	LF1284	$9.95	$6.95	$5.95

FOR 50 WAY RIBBON CABLE

Typical Impedance	25MHz	100MHz	Cat.	Qty 1+	Qty 25+	Qty 100+
Each	72Ω	190Ω	LF1286	$17.95	$12.45	$10.45

Round Cable Suppression Sleeves

Basically a split high permeability ferrite core with a plastic case, these devices are ideal where parasitic voltage spikes or RF breakthrough are a problem or potential problem. The cores come in a hinged plastic case, simply snap on to the computer or data cable. Three versions are offered which cover most computer leads etc. For extra security, lock assembly together with a cable tie.

TYPICAL IMPEDANCE VS FREQUENCY

(Rise Time of Interference Signal) Note: All figures are approximate

Model	Cable Dia	1MHz	25MHz	50MHz	100MHz	300MHz	500MHz
U-25	12.5mm	10Ω	150Ω	200Ω	250Ω	290Ω	200Ω
U-16	8.3mm	20Ω	100Ω	200Ω	220Ω	150Ω	<100Ω
U-15	7.0mm	<10Ω	160 Ω	220-250Ω	280Ω	300+Ω	245Ω

PLEASE NOTE:

- *Full specifications available on website.*
- *If the cable can be looped through the core twice or more (obviously only for thinner cables) the attenuation is increased substantially.*

MODEL U25:

This offers impedance (peak approx 300Ω at 2-300MHz)with negligible impedance below 1MHz. Plastic case measures 32L x 30mm square. It will take a lead up to 12mm (1/2") diameter but preferably 10mm.

MODEL U16:

A compact attenuator that will pass a cable up to 8mm dia (most monitor cables etc). Typical impedance at 25MHz 300Ω approx, 590Ω at 100MHz dropping off after that.

- Case measures 25.9(L) x21.5(Dia)mm

MODEL U15:

This model is for 7mm dia cable or smaller.

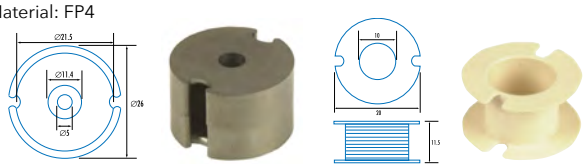
- Offers good protection up to 500MHz

	Model	Cat.	Qty 1+	Qty 25+	Qty 100+
Each	U25	LF1290	$12.95	$8.95	$7.45
Pkt 4	U16	LF1292	$16.95	$11.45	$9.95
Pkt 2	U15	LF1294	$12.95	$8.95	$7.45

POT CORE & BOBBIN

This handy sized pot core set is made from low loss material and is equivalent to the original Philips FX 2240 part.

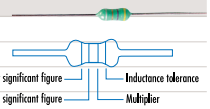
- Size (each half): 26(OD) x 11.5(ID) x 8(H)mm
- Material: FP4



	Cat.	Qty 1+	Qty 25+	Qty 100+
Pot Core - pair	LF1060	$8.95	$6.25	$5.35
Bobbin to suit	LF1062	$1.95	$1.35	$1.15

RF CHOKES

Specifications	All Models
Axial Leads	Colour coded per IEC
Tolerance	±10%,
Operating Temp	-20°C to +80°C
Dielectric Withstanding Voltage	250Vrms



(µH) DC Inductance	Rated Resistance (Ω)	DC Current Max	Cat.
1µ0	0.09	920mA	LF1510
1µ5	0.23	830mA	LF1512
2µ2	0.28	750mA	LF1514
3µ3	0.34	670mA	LF1516
4µ7	0.39	620mA	LF1518
6µ8	0.48	550mA	LF1520
10	0.58	500mA	LF1522
15	0.72	460mA	LF1524
22	0.84	410mA	LF1526
33	1.03	370mA	LF1528
47	1.22	340mA	LF1530
68	1.47	305mA	LF1532
100	1.80	275mA	LF1534
150	4.20	175mA	LF1536
220	5.10	155mA	LF1538
330	6.40	137mA	LF1540
470	7.70	126mA	LF1542
680	9.40	113mA	LF1544
1000	14.00	100mA	LF1546

	Qty 1+	Qty 25+	Qty 100+
All of the above	$0.95	$0.66	$0.57

FERRITE RF COIL PACK

Mini RF Coil Pack

Set of 4 standard coils for AM section of a superheterodyne receiver with 455kHz. IF offset. Colour dot on top of ferrite slug indicates type.

- Red is the oscillator coil
- White is the first 455kHz IF
- White is the 2nd
- Black is the 3rd

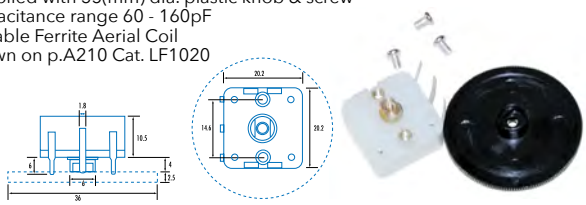
See website for more information

	Cat.	Qty 1+	Qty 25+	Qty 100+
	LF1050	$5.95	$4.15	$3.45

MINI TUNING GANG CAPACITOR

As used in most transistor radios and many kits that incorporate a radio.

- Size 20 x 20 x 10.5 high (mm)
- Supplied with 35(mm) dia. plastic knob & screw
- Capacitance range 60 - 160pF
- Suitable Ferrite Aerial Coil shown on p.A210 Cat. LF1020



	Cat.	Qty 1+	Qty 25+	Qty 100+
20 x 20 x 10.5	RV5728	$6.75	$4.70	$4.05

EMI FILTERS

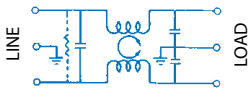
IEC EMI Power Line Filter - 6 Amp

These Industry standard design RF/EMI filters are designed to reduce line - to - ground (common mode) interference. They accept a standard IEC power line connector and are panel mounted. They meet (or exceed) international standard leakage requirements and are rated for mains voltages of 115 to 250V, 50, 60Hz.

- Safety & construction are in compliance with UL, CSA, VDE

Specifications	MS4003
Rated Voltage	115/250VAC
Power Line Freq	50/60Hz
Rated Current	6 amps
Maximum Leakage Current	@ 115 VAC 60Hz 0.25mA
Line To Ground	@ 250VAC 50Hz 0.50mA
Test Voltage	Line to ground: 2250VDC, one minute Line to line: 1450VDC, one minute
Typical Insertion Loss (dB) =	Line-to-ground in 50Ω system.

Current Rating	Freq (MHz) 0.15	0.5	1	5	10	30
6A	10	20	25	42	45	50



Cat.	Qty 1+	Qty 4+	Qty 10+
MS4003	$9.95	$8.75	$7.75

240V AC EMI Filter

Designed for mounting inside a chassis, these industry standard RF/EMI filters are predesigned to reduce line-to-ground (common mode) interference. Rated for mains voltages of 125 or 240VAC 50 or 60Hz, they are very useful when mains cords are fixed to the outside chassis and an IEC320 inlet is not suitable.

1 YEAR LIMITED WARRANTY

POWERTECH

MS4000

Specifications	MS4000/MS4001
Rated Voltage	250VAC, 50Hz
Rated Current	10A
Leak Current	0.8mA max
Insulation Resistance	100M Ω min
Attenuation	1 - 50MHz
Termination	PCB mounting pins (MS4000) & solder tags (MS4001)
Dimensions: MS4000	36(L) x 31(W) x 19(H)mm
Dimensions: MS4001	50(L) x 25(W) x 31(H)mm

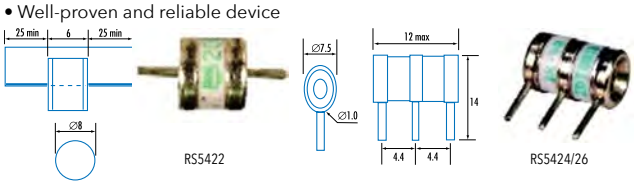
	Cat.	Qty 1+	Qty 25+	Qty 100+
PCB Mount - 4 Way	MS4000	$9.95	$6.95	$5.95
Chassis Mount - 6 Way	MS4001	$12.95	$8.95	$7.45

SURGE ARRESTORS

Gas Discharge Type Surge Arresters

Gas discharge arresters are ideal for quenching high voltage, fast rise-time interference transients. They are very high impedance (virtually open circuit) in the normal state with a typical capacitance of 1pF between electrodes. When a voltage spike appears, they arc over and present a relatively low impedance in this condition effectively quenching the spike. They are suitable for protection of telecom lines and antenna circuits. They are not recommended to be fitted across mains circuits as the low source impedance of the mains could destroy these devices after the fault spike (oh no!) has cleared.

- Well-proven and reliable device



DC Spark Over Voltage	Axial 2 Electrodes	PCB Mount 3 Electrodes
90V ±20%		Cat. RS5424
230V ±15%	Cat. RS5422	Cat. RS5426

MANUFACTURERS: CONTACT US FOR BULK PRICES.

		Cat.	Qty 1+	Qty 10+	Qty 25+
230V	2 Electrodes	RS5422	$2.95	$2.65	$2.35
90V	3 Electrodes	RS5424	$2.95	$2.65	$2.35
230V	3 Electrodes	RS5426	$2.95	$2.65	$2.35

VOLTAGE PROTECTION

Metal Oxide Varistors (MOV)

Ideal protection against voltage spikes or transients. Helps to prevent damage to sensitive equipment such as microprocessors and digital electronics.

- Resin dipped case
- Prices per unit

Volt	DIA	Clamping Voltage	Peak Current	Max Energy	Cat.	Qty 1+	Qty 10+	Qty 25+
10VAC	8	143V	100A	0.4J	RN3411	$2.25	$2.00	$1.80
10VAC	13.5	18V	500A	2.8J	RN3412	$2.25	$2.00	$1.80
10VAC	17.5	143V	1000A	6.6J	RN3413	$2.25	$2.00	$1.80
275VAC	13.5	710V	2500A	60J	RN3406	$2.25	$2.00	$1.80
275VAC	17.5	710V	4500A	115J	RN3400	$2.25	$2.00	$1.80
275VAC	24	710V	6500A	190J	RN3404	$2.25	$2.00	$1.80
460VAC	13.5	750V	2500A	125J	RN3415	$2.25	$2.00	$1.80
460VAC	17.5	750V	4500A	203J	RN3416	$2.25	$2.00	$1.80
460VAC	24	1240V	6500A	266J	RN3417	$2.25	$2.00	$1.80

TRANSIENT VOLTAGE SUPPRESSORS (TVS)

- Excellent clamping voltage
- Low Zener impedance
- Fast response time
- Operating & storage temperature -55°C to 175°C

400W RANGE (DC)

- Peak power: 400W
- Steady state: 1W

DO-41

Standoff Voltage	VBR	Clamp Voltage	Peak	Package Size	Cat.	Qty 1+	Qty 10+	Qty 25+
5.5V	6.12	10.8V	38A	D0-41	ZR1150	$1.25	$1.10	$1.00
12.1V	13.5	22.0V	19A	D0-41	ZR1152	$1.25	$1.10	$1.00
12.9V	14.4	23.5V	18A	D0-41	ZR1154	$1.25	$1.10	$1.00

400W RANGE (AC)

- Peak power: 400W
- Steady state: 1W

Standoff Voltage	VBR	Clamp Voltage	Peak	Package Size	Cat.	Qty 1+	Qty 10+	Qty 25+
12.8V	14.3	21.2V	20A	D0-41	ZR1160	$1.45	$1.30	$1.15
13.6V	15.2	22.5V	19A	D0-41	ZR1162	$1.45	$1.30	$1.15
324V	380	548V	0.7A	D0-41	ZR1164	$1.45	$1.30	$1.15

1500W RANGE (DC)

- Peak power: 1500W
- Steady state: 5W

DO-201

Standoff Voltage	VBR	Clamp Voltage	Peak	Package Size	Cat.	Qty 1+	Qty 10+	Qty 25+
12.1V	13.5	22V	69.1A	D0-201	ZR1168	$1.95	$1.75	$1.55
12.9V	14.4	23.5V	64.7A	D0-201	ZR1170	$1.95	$1.75	$1.55

1500W RANGE (AC)

- Peak power: 1500W
- Steady state: 5W

Standoff Voltage	VBR	Clamp Voltage	Peak	Package Size	Cat.	Qty 1+	Qty 10+	Qty 25+
13.6V	15.2	22.5V	67.6A	D0-201	ZR1175	$2.25	$2.00	$1.80
30.8V	34.2	49.9V	30.5A	D0-201	ZR1177	$2.25	$2.00	$1.80
342V	380	548V	2.8A	D0-201	ZR1180	$2.25	$2.00	$1.80

click & collect

Click and Collect is now available at all Jaycar stores! Simply place your order online and the team at your local store will get the order together for you, ready to collect in just 1 hour!

RESISTORS

	1% Metal A (1/2W)	5% Carbon B (1/4W)	5% Carbon C (1W)	5% W/wound D (5W)	5% W/wound E (10W)
0R0		RR1500			
0R1				RR3206	
0R22				RR3208	
0R47				RR3214	
0R75					
0R82					
1R0		RR1502	RR2502	RR3220	RR3340
1R2		RR1504	RR2504		
1R5		RR1506	RR2506	RR3230	
1R8		RR1508	RR2508	RR3232	
2R2		RR1510	RR2510	RR3234	RR3344
2R7		RR1512	RR2512	RR3236	
3R3		RR1514	RR2514	RR3238	RR3346
3R9		RR1516	RR2516	RR3240	RR3347
4R7		RR1518	RR2518	RR3242	RR3348
5R6		RR1520	RR2520	RR3244	RR3349
6R8		RR1522	RR2522	RR3246	RR3350
8R2		RR1524	RR2524	RR3248	RR3351
10R	RR0524		RR2526	RR3250	RR3352
11R	RR0525				
12R	RR0526		RR2528	RR3252	RR3353
13R	RR0527				
15R	RR0528		RR2530	RR3254	RR3354
16R	RR0529				
18R	RR0530		RR2532	RR3256	RR3355
20R	RR0531				
22R	RR0532		RR2534	RR3258	RR3356
24R	RR0533				
27R	RR0534		RR2536	RR3260	RR3357
30R	RR0535				
33R	RR0536		RR2538	RR3262	
36R	RR0537				
39R	RR0538		RR2540	RR3264	
43R	RR0539				
47R	RR0540		RR2542	RR3266	RR3360
51R	RR0541				
56R	RR0542		RR2544	RR3268	
62R	RR0543				
68R	RR0544		RR2546	RR3270	RR3362
75R	RR0545				
82R	RR0546		RR2548	RR3272	
91R	RR0547				
100R	RR0548		RR2550	RR3274	RR3364
110R	RR0549				
120R	RR0550		RR2552	RR3276	
130R	RR0551				
150R	RR0552		RR2554	RR3278	
160R	RR0553				
180R	RR0554		RR2556	RR3280	
200R	RR0555				
220R	RR0556		RR2558	RR3282	
240R	RR0557				
270R	RR0558		RR2760	RR3284	RR3369
300R	RR0559				
330R	RR0560		RR2762	RR3286	
360R	RR0561				
390R	RR0562		RR2764	RR3288	
430R	RR0563				
470R	RR0564		RR2766	RR3290	RR3372
510R	RR0565				
560R	RR0566		RR2768	RR3292	
620R	RR0567				
680R	RR0568		RR2770	RR3294	
750R	RR0569				
820R	RR0570		RR2772	RR3296	RR3375
910R	RR0571				
1K0	RR0572		RR2774	RR3298	
1K1	RR0573				
1K2	RR0574		RR2776		
1K3	RR0575				
1K5	RR0576		RR2778	RR3302	
1K6	RR0577				
1K8	RR0578		RR2780		
2K0	RR0579				
2K2	RR0580		RR2782	RR3306	
2K4	RR0581				
2K7	RR0582		RR2784		
3K0	RR0583				
3K3	RR0584		RR2786	RR3310	
3K6	RR0585				
3K9	RR0586		RR2788		
4K3	RR0587				
4K7	RR0588		RR2790	RR3312	

	1% Metal A (1/2W)	5% Carbon B (1/4W)	5% Carbon C (1W)
5K1	RR0589		
5K6	RR0590		RR2792
6K2	RR0591		
6K8	RR0592		RR2794
7K5	RR0593		
8K2	RR0594		RR2796
9K1	RR0595		
10K	RR0596		RR2798
11K	RR0597		
12K	RR0598		RR2800
13K	RR0599		
15K	RR0600		RR2802
16K	RR0601		
18K	RR0602		RR2804
20K	RR0603		
22K	RR0604		RR2806
24K	RR0605		
27K	RR0606		RR2808
30K	RR0607		
33K	RR0608		RR2810
36K	RR0609		
39K	RR0610		RR2812
43K	RR0611		
47K	RR0612		RR2814
51K	RR0613		
56K	RR0614		RR2816
62K	RR0615		
68K	RR0616		RR2818
75K	RR0617		
82K	RR0618		RR2820
91K	RR0619		
100K	RR0620		RR2822
110K	RR0621		
120K	RR0622		RR2824
130K	RR0623		
150K	RR0624		RR2826
160K	RR0625		
180K	RR0626		RR2828
200K	RR0627		
220K	RR0628		RR2830
240K	RR0629		
270K	RR0630		RR2832
300K	RR0631		
330K	RR0632		RR2834
360K	RR0633		
390K	RR0634		RR2836
430K	RR0635		
470K	RR0636		RR2838
510K	RR0637		
560K	RR0638		RR2840
620K	RR0639		
680K	RR0640		RR2842
750K	RR0641		
820K	RR0642		RR2844
910K	RR0643		
1M0	RR0644		RR2846
1M2		RR1650	RR2848
1M5		RR1652	RR2850
1M8		RR1654	
2M2		RR1656	RR2854
2M7		RR1658	
3M3		RR1660	RR2858
3M9		RR1662	RR2860
4M7		RR1664	RR2862
5M6		RR1666	RR2864
6M8		RR1668	
8M2		RR1670	RR2868
10M	RR0660	RR1672	RR2870

A: 0.5W 1% Metal Film Mini Size

Same size as standard 1/4W Carbon Film.

	Qty 1+	Qty 25+	Qty 100+
Pkt 8	$0.85	$0.51	$0.38

B: 0.25W 5% Carbon Film

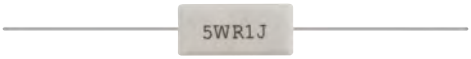
5%, available from 1Ω to 8.2Ω & 1.2MΩ to 10MΩ. Use Mini Metal Film for other values.

	Qty 1+	Qty 25+	Qty 100+
Pkt 8	$0.68	$0.41	$0.31

C: 1W 5% Carbon Film

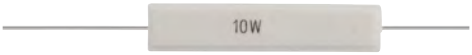
	Qty 1+	Qty 25+	Qty 100+
Pkt 2	$0.68	$0.41	$0.31

D: 5W 5% Wirewound

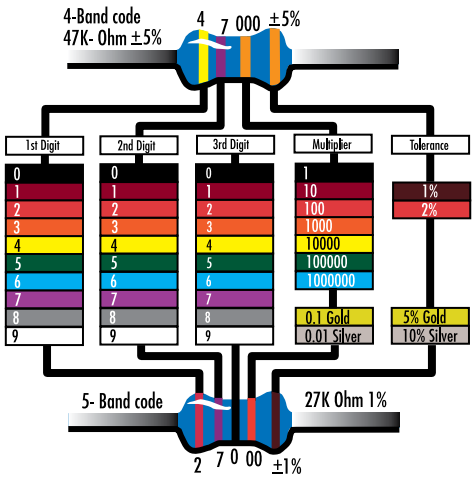


	Qty 1+	Qty 25+	Qty 100+
Each	$0.68	$0.41	$0.31

E: 10W 5% Wirewound



	Qty 1+	Qty 25+	Qty 100+
Each	$1.80	$1.25	$1.05



BUY A LOT OF RESISTORS?
Check out our economical pack deals on page A214

Component Lead Forming Tool

Get the hole spacing for your resistors and diodes perfect every time. This handy forming tool provides uniform hole spacing from 10 to 38mm. Suitable for production assembly, education and training. The tool is double sided with one side for use with DO47 outline diodes (e.g. 1N914) and 1W Zener diodes; the other side being suitable for 1/4W resistors, DO41 outline diodes (e.g. 1N4004).

- Made in USA from engineering plastic
- Dimensions: 138(L)mm

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1810	$8.95	$7.95	$6.95

TRIMPOTS & RESISTOR PACKS

PROTOTYPE RESISTOR PACKS

0.25 Watt Carbon Film Resistors
300 PIECES

This pack includes five of virtually each value from 1 Ω to 10 Meg. Sixty different values. All resistors are bandoleered for easy sorting. Values supplied are: 1Ω, 1.5, 2.2, 3.3, 4.7, 5.6, 10, 12, 15, 22, 27, 33, 39, 47, 56, 68, 82, 100, 120, 180, 220, 270, 330, 470, 560, 680, 820, 1k, 1k2, 1k5, 1k8, 2k2, 3k3, 3k9, 4k7, 5k6, 8k2, 10k, 12k, 15k, 18k, 22k, 27k, 33k, 39k, 47k, 56k, 68k, 82k, 100k, 120k, 150k, 220k, 270k, 330k, 470k, 1M, 2M7, 4M7 & 10M.

Cat.	Qty 1+	Qty 25+	Qty 100+
RR1680	$12.95	$7.45	$5.45

0.5W 1% Mini Size Metal Film Pack
300 PIECES

Pack includes five of each value from 10Ω to 1 Meg. Have that 1% resistor when you need it. Five of each of the following values supplied. 10Ω, 12, 15, 22, 27, 33, 39, 47, 56,68, 75, 82, 100, 120, 180, 220, 270, 330, 390, 470, 560, 680, 820, 910, 1k, 1k2, 1k8, 2k2, 3k3, 3k9, 4k7, 5k6, 6k8, 8k2, 10k, 12k, 15k, 18k, 22k, 27k, 33k, 39k, 47k, 56k, 68k, 82k, 91k, 100k, 120k, 150k, 180k, 200k, 220k, 270k, 330k, 390k, 470k, 560k, 750k & 1M. Total 60 values - 300 resistors. You know exactly what you are getting when you buy our resistor packs.

Cat.	Qty 1+	Qty 25+	Qty 100+
RR0680	$19.95	$11.95	$8.95

Ultimate Resistor Pack
1700 PIECES

Top quality, guaranteed 1/4 watt 5% miniature sized carbon film. In fact, they look like 1/8W, they are so small. This pack gives you almost every resistor in the E24 range (eg. 1.8K, 2.0K, 2.2K). You get 10 of every value, a total of 170 values, 1700 resistors in all and they are bandoleered for easy sorting. Buy this pack and you should NEVER be short of any resistor again. Massive savings over normal costs.

Cat.	Qty 1+	Qty 25+	Qty 100+
RR2000	$39.95	$23.95	$17.95

0.25 Watt Carbon Film Resistors
850 PIECES

This pack includes 10 of every value of 1/4W 5% carbon film resistors from 1Ω to 10MΩ. This is the E12 range, which goes like this - 10, 12, 15, 18, 22, 27, 33, 39, 47, 56, 68, 82, 100. Total values supplied is 85, giving a total of 850 resistors. Resistors are bandoleered for easy sorting. A great way to never be out of that odd resistor & save a packet at the same time.

Cat.	Qty 1+	Qty 25+	Qty 100+
RR1697	$22.95	$13.45	$9.95

LIGHT DEPENDENT RESISTORS

Light Dependent Resistor (LDR)

Cadmium sulphide (CdS) light dependent resistor cell.

Specifications	RD3485
Dark Resistance	0.5MΩ min.
Light Resistance	2.8kΩ min/8.4kΩ max.
Max Dissipation	100mW
Rise Time	(0-63%) 50mS
Decay Time	(100 - 37%) 40mS
Dimensions	8.5mm x 10.14mm
Lead Spacing	7.68mm

Cat.	Qty 1+	Qty 25+	Qty 100+
RD3485	$3.95	$2.75	$2.35

Light Dependent Resistor (LDR)

Cadmium Sulphide (CdS) light dependent resistor cell. Similar to Philips ORP12.

Specifications	RD3480
Dark Resistance	min 10MΩ
Light Resistance	48k - 140kΩ
Max Dissipation	30mW
Rise Time	(0~63%) 40mS
Decay Time	(100~37%) 10mS
Dimensions	5.1mm x 4.3mm ±0.2
Lead Spacing	3.4mm

Cat.	Qty 1+	Qty 25+	Qty 100+
RD3480	$3.95	$2.75	$2.35

OPEN AIR RESISTOR

Welwyn Open Air Resistor
OAR3-R010FI 0R010 3W 1%

A PCB mount current shunt/sense (resistor) up to about 20A. It is a very stable (extremely low temp drift), high tolerance (1%), low inductance (<10nH) shunt resistor that can be used in high current sense applications: motor current sense, regulated power supplies, power amplifier current sense, battery current sense. See website for datasheet. Sold individually

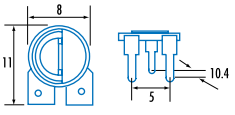
Specifications	RR3420
Power	3W
Resistance	0.01Ω
Tolerance	±1%
Dimensions	15.2(L) x 25.4(H)mm

Cat.	Qty 1+	Qty 25+	Qty 100+
RR3420	$2.95	$2.05	$1.75

Are you in the trade?
For professionals engaged in electronics & construction-related industries.
trade card
jaycar

TRIMPOTS

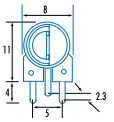
Horizontal Mini Trimpots
OPEN CARBON TYPE



Value	Cat.	Value	Cat.
500Ω	RT4304	20kΩ	RT4314
1kΩ	RT4306	50kΩ	RT4316
2kΩ	RT4308	100kΩ	RT4318
5kΩ	RT4310	200kΩ	RT4320
10kΩ	RT4312	500kΩ	RT4324

Cat.	Qty 1+	Qty 25+	Qty 100+
All Types / Each	$0.68	$0.48	$0.41

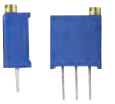
Vertical Trimpots 5mm
OPEN CARBON TYPE



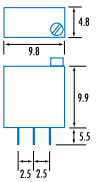
Value	Cat.	Value	Cat.
200Ω	RT4006	50kΩ	RT4020
500Ω	RT4008	100kΩ	RT4022
1kΩ	RT4010	250kΩ	RT4024
5kΩ	RT4014	500kΩ	RT4026
10kΩ	RT4016	1MΩ	RT4028
20kΩ	RT4018	2MΩ	RT4029

Cat.	Qty 1+	Qty 25+	Qty 100+
All Types / Each	$0.68	$0.48	$0.41

25 Turn Cermet (3296W)



These are 25 turn industrial quality sealed trimpots. Pins are in a row, with 2.5mm spacing. Adjustment is vertical. Power rating is 0.5 watts.

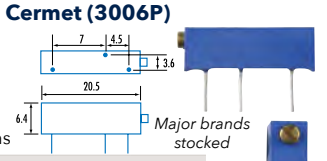


Value	Cat.	Value	Cat.
100Ω	RT4640	10kΩ	RT4650
500Ω	RT4642	20kΩ	RT4652
1kΩ	RT4644	50kΩ	RT4654
2kΩ	RT4646	100kΩ	RT4656
5kΩ	RT4648	1MΩ	RT4658

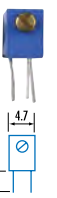
Cat.	Qty 1+	Qty 25+	Qty 100+
All Types / Each	$2.95	$2.00	$1.75

Multiturn Cermet (3006P)

0.75 watts @ 70%. Horizontal side adjustment.
- 15-20 turns



Major brands stocked

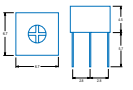


Value	Cat.	Value	Cat.
100Ω	RT4602	10kΩ	RT4614
500Ω	RT4604	20kΩ	RT4616
1kΩ	RT4608	50kΩ	RT4618
2kΩ	RT4610	100kΩ	RT4620
5kΩ	RT4612	1MΩ	RT4622

Cat.	Qty 1+	Qty 25+	Qty 100+
All Types / Each	$1.95	$1.35	$1.15

Trimpot Cermet 1 Turn 10kΩ (3386P)

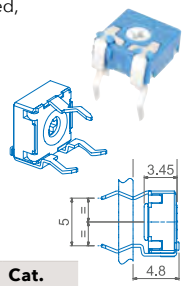
- Single turn
- 10kΩ
- 10% tolerance

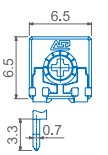


Cat.	Qty 1+	Qty 25+	Qty 100+
RT4600	$1.95	$1.35	$1.15

Piher Style Horizontal 5mm

A range of top quality sealed, standard sized trimpots.
- Dust proof enclosure
- Polyester substrate
- Wiper positioned at 50%
- Accidental rotor movement protected
- Max voltage 100V / Nom power 0.1W
- Linear curve, Tolerance ±30%
- End resistance 10Ω carbon type





Value	Cat.	Value	Cat.
200Ω	RT4350	20kΩ	RT4362
500Ω	RT4352	50kΩ	RT4364
1kΩ	RT4354	100kΩ	RT4366
2kΩ	RT4356	250kΩ	RT4368
5kΩ	RT4358	500kΩ	RT4370
10kΩ	RT4360	1MΩ	RT4372

Cat.	Qty 1+	Qty 25+	Qty 100+
All Types / Each	$1.35	$0.90	$0.80

POTENTIOMETERS

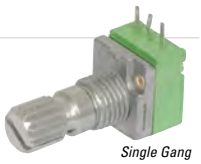
9mm Square PCB Mounting

These pots are rapidly becoming the industry standard for miniaturised audio, digital and telecommunications equipment. This series features good solder bath immersion resistance, 300° rotation and standard 18 tooth metric pre-cut actuator shafts. Two popular metric knobs are now carried, however metric knobs are now commonly available. Both single and dual gang types are stocked in log and linear resistance tapers.

Electrical	Linear Taper(B)	Other Taper	Mechanical	
Rated Wattage	0.05W	0.02W	Rotation Angle	300° ±5°
Rated Voltage	50VAC	50VAC	Rotation Torque	20~250gf.cm
Slider Noise	<100mV		Stop Strength	5kgf.cm/min.
Insulation Resistance	>100MΩ at 250VDC			
Dielectric	300VAC/Minute			
Tracking Error	Within 3dB at 40-0dB			

LOG SINGLE GANG (A)

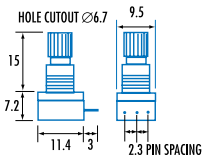
Value	Cat.	Qty 1+	Qty 10+	Qty 50+
10kΩ	RP8610	$4.95	$3.95	$3.45
50kΩ	RP8616	$4.95	$3.95	$3.45



Single Gang

LINEAR SINGLE GANG (B)

Value	Cat.	Qty 1+	Qty 10+	Qty 50+
1kΩ	RP8504	$4.95	$3.95	$3.45
10kΩ	RP8510	$4.95	$3.95	$3.45
50kΩ	RP8516	$4.95	$3.95	$3.45
100kΩ	RP8518	$4.95	$3.95	$3.45
1MΩ	RP8524	$4.95	$3.95	$3.45



Suitable knobs are HK7770/72, shown on page A216

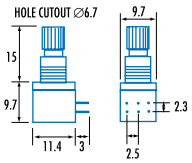
LOG DOUBLE GANG (A)

Value	Cat.	Qty 1+	Qty 10+	Qty 50+
10kΩ	RP8756	$6.95	$5.55	$4.85
50kΩ	RP8760	$6.95	$5.55	$4.85

Double Gang

LINEAR DOUBLE GANG (B)

Value	Cat.	Qty 1+	Qty 10+	Qty 50+
10kΩ	RP8706	$6.95	$5.55	$4.85
50kΩ	RP8710	$6.95	$5.55	$4.85
100kΩ	RP8712	$6.95	$5.55	$4.85



16mm PCB Mounting

These pots have imperial standard shaft.

- Shaft is 1/4" D type (30% of shaft has been removed for flat), so they suit all our knob range
- Shaft length is 30mm
- Power rating Linear 0.125W and Log 0.06W
- Max operating voltage: 150VAC
- Supplied with nut and washer

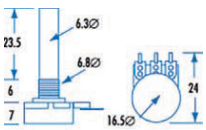
LOG SINGLE GANG (A)

Value	Cat.	Qty 1+	Qty 10+	Qty 50+
1kΩ	RP7604	$3.95	$3.15	$2.75
10kΩ	RP7610	$3.95	$3.15	$2.75
50kΩ	RP7616	$3.95	$3.15	$2.75

Single Gang

LINEAR SINGLE GANG (B)

Value	Cat.	Qty 1+	Qty 10+	Qty 50+
1kΩ	RP7504	$3.95	$3.15	$2.75
5kΩ	RP7508	$3.95	$3.15	$2.75
10kΩ	RP7510	$3.95	$3.15	$2.75
50kΩ	RP7516	$3.95	$3.15	$2.75
100kΩ	RP7518	$3.95	$3.15	$2.75
1MΩ	RP7524	$3.95	$3.15	$2.75



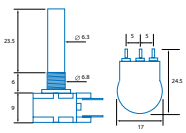
LOG DOUBLE GANG (A)

Value	Cat.	Qty 1+	Qty 10+	Qty 50+
10kΩ	RP7756	$5.95	$4.75	$4.15

Double Gang

LINEAR DOUBLE GANG (B)

Value	Cat.	Qty 1+	Qty 10+	Qty 50+
50kΩ	RP7708	$5.95	$4.75	$4.15
100kΩ	RP7712	$5.95	$4.75	$4.15



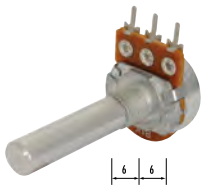
24mm PCB Mounting

With imperial standard shaft & bushings made to our rigid engineering specifications. The potentiometers are full size - 24mm diameter types. They have genuine 6.35mm (1/4") shafts with a flat machined 25% of the diameter for grubscrews or interference fit knob mounting. The shaft is a generous 38mm long. The bush is a 3/8" 32 T.H.D. type which we believe is necessary for good fixing to a panel. Another important feature of the pots is their PCB mount capability. The pins are rigidly mounted on phenolic with the centre pin offset from the two outer terminals. When soldered into a PCB, the pot is quite rigidly held on its own. Double gang pots are held in 6 places and require no extra mechanical mounting assistance. The pins are large enough to terminate screened cable, etc., if the job requires hard wiring.

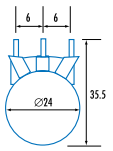
- We have stocked this product for over 10 years now and have no intention of changing it. You can therefore confidently design around this product
- Supplied with nut and washer
- Power rating Log 0.25W and Linear 0.5W

LOG SINGLE GANG (A)

Value	Cat.	Qty 1+	Qty 10+	Qty 50+
1kΩ	RP3604	$3.95	$3.15	$2.75
5kΩ	RP3608	$3.95	$3.15	$2.75
10kΩ	RP3610	$3.95	$3.15	$2.75
25kΩ	RP3614	$3.95	$3.15	$2.75
50kΩ	RP3616	$3.95	$3.15	$2.75
100kΩ	RP3618	$3.95	$3.15	$2.75
250kΩ	RP3620	$3.95	$3.15	$2.75
500kΩ	RP3622	$3.95	$3.15	$2.75
1MΩ	RP3624	$3.95	$3.15	$2.75

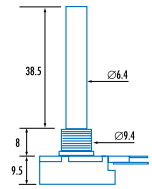


Single Gang



LINEAR SINGLE GANG (B)

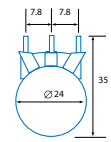
Value	Cat.	Qty 1+	Qty 10+	Qty 50+
500Ω	RP3502	$3.95	$3.15	$2.75
1kΩ	RP3504	$3.95	$3.15	$2.75
5kΩ	RP3508	$3.95	$3.15	$2.75
10kΩ	RP3510	$3.95	$3.15	$2.75
25kΩ	RP3514	$3.95	$3.15	$2.75
50kΩ	RP3516	$3.95	$3.15	$2.75
100kΩ	RP3518	$3.95	$3.15	$2.75
250kΩ	RP3520	$3.95	$3.15	$2.75
500kΩ	RP3522	$3.95	$3.15	$2.75
1MΩ	RP3524	$3.95	$3.15	$2.75



LOG DOUBLE GANG (A)

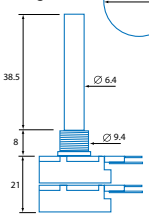
Value	Cat.	Qty 1+	Qty 10+	Qty 50+
10kΩ	RP3756	$6.95	$5.55	$4.85
50kΩ	RP3760	$6.95	$5.55	$4.85
100kΩ	RP3762	$6.95	$5.55	$4.85

Double Gang



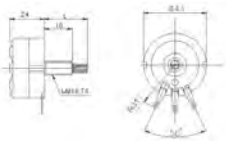
LINEAR DOUBLE GANG (B)

Value	Cat.	Qty 1+	Qty 10+	Qty 50+
10kΩ	RP3706	$6.95	$5.55	$4.85
25kΩ	RP3708	$6.95	$5.55	$4.85
50kΩ	RP3710	$6.95	$5.55	$4.85
100kΩ	RP3712	$6.95	$5.55	$4.85



5Ω 15W Wirewound

Specifications	RP3975
Resistance	5Ω
Resistance Curve	Linear (B)
Rated Wattage	15 Watts
Shaft	Spline (metric)
Body Measures	41mm OD x 24mm Depth
Shaft Length	20mm; 9.0mm hole required
Lugs	Solder Type
Total Rotation Angle	300° ±5°
Rotation Torque	70~400gf.cm
Stopper Strength	10kgf.cm



	Cat.	Qty 1+	Qty 10+	Qty 50+
	RP3975	$17.95	$13.95	$12.45

Potentiometer Nuts

Packet of 12 nuts and washer to suit our pots.

		Cat.	Qty 1+	Qty 10+	Qty 50+
24mm	3/8" 32THD	RP3500	$6.50	$5.20	$4.55
16mm	Metric	RP7500	$6.50	$5.20	$4.55

EQUIPMENT KNOBS

PLASTIC KNOBS

HK7760 HK7762 HK7764 HK7766 HK7705 HK7713 HK7770 HK7772 HK7788 HK7549

HK7707 HK7715 HK7709 HK7717 HK7711 HK7787 HK7730 HK7731 HK7732 HK7733 HK7734 HK7700

FLUTED PLASTIC WITH POINTER SLOT & SKIRT

Grubscrew fixing - brass insert. Suit 0.25"/6.35mm shaft.

Lifetime warranty on all knobs!

LIFETIME GUARANTEE

Colour	Ø x H (mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
Black	16 x 14	HK7760	$1.95	$1.75	$1.55
Black	20 x 16	HK7762	$2.45	$2.20	$1.95
Black	24 x 20	HK7764	$2.95	$2.65	$2.35
Black	35 x 19	HK7766	$3.95	$3.55	$3.15

PUSH ON - COLOURED CAP

Suit 0.25"/6.35mm shaft.

Colour	Ø x H (mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
Red	18 x 20	HK7705	$1.25	$1.10	$1.00
Yellow	18 x 20	HK7713	$1.25	$1.10	$1.00
Black	18 x 20	HK7707	$1.25	$1.10	$1.00
White	18 x 20	HK7715	$1.25	$1.10	$1.00
Blue	18 x 20	HK7709	$1.25	$1.10	$1.00
Grey	18 x 20	HK7717	$1.25	$1.10	$1.00
Green	18 x 20	HK7711	$1.25	$1.10	$1.00

BLACK PLASTIC WITH POINTER

Brass ferrule insert. Suit 0.25"/6.35mm shaft.

Colour	Ø x H (mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
Black	23 x 14	HK7787	$2.45	$2.20	$1.95

METRIC 18T

Suits our 9mm Mini Potentiometers. Matches HK7760/66 series. Fits all standard metric shafts, including RP8504 series, RP8610 series & RP8706 series on opposite page.

LIFETIME GUARANTEE

Colour	Ø x H (mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
Black	15 x 14	HK7770	$1.95	$1.75	$1.55
Black	20 x 16	HK7772	$2.45	$2.20	$1.95

SKIRT NUMBERED 1-10

Grubscrew fixing - brass ferrule insert. Suit 0.25"/6.35mm shaft.

Colour	Ø x H (mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
Silver/Black	29 x 18	HK7788	$3.45	$3.05	$2.75
Silver/Black	36 x 23.5	HK7549	$3.45	$3.05	$2.75

PUSH ON - 18T SPLINE

Suits our 9mm Mini Potentiometers. Matches HK7760/66 series.
Fits all standard metric shafts.

Colour	Ø x H (mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
Grey/Red	13 x 18	HK7730	$1.45	$1.30	$1.15
Grey/Yellow	13 x 18	HK7731	$1.45	$1.30	$1.15
Grey/Green	13 x 18	HK7732	$1.45	$1.30	$1.15
Grey/Blue	13 x 18	HK7733	$1.45	$1.30	$1.15
Grey/White	13 x 18	HK7734	$1.45	$1.30	$1.15

PLASTIC POINTER

Suit 0.25"/6.35mm shaft.

Colour	Ø x H (mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
Black	19 x 32	HK7700	$1.95	$1.75	$1.55

CAUTION WHEN ORDERING!

When ordering knobs (from any supplier) double check that the knob you are getting will fit the shaft of the component you are using it with. For example a knob with a 6mm shaft hole will not accept a 1/4" shaft. As you are probably aware 1/4" equals 6.35mm.

That 0.35mm is enough to render the knob unusable. So called "metric" knobs often have an 18 spline interference fit hole suitable only for push-on type aluminium shafts. Note: Apart from metric, all knobs shown on this page fix to 0.25"/6.35mm shafts (with flat) unless otherwise stated.

ALUMINIUM / PLASTIC INSERT KNOBS

HK7020 HK7022 HK7009 HK7010 HK7011 HK7786 HK7740 HK7741 HK7742

BRUSHED ALUMINIUM

Ideal for HiFi projects.
- Suit 0.25"/6.35mm shaft
- Grub screw fixing

LIFETIME GUARANTEE

Colour	Ø x H (mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
Silver	16 x 14	HK7020	$4.50	$4.05	$3.60
Silver	22 x 14	HK7022	$4.95	$4.45	$3.95

BLACK ANODISED ALUMINIUM

Grub screw fixing. Suit 0.25"/6.35mm shaft.

Colour	Ø x H (mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
Black	16 X 14	HK7009	$4.50	$4.05	$3.60
Black	22 x 14	HK7010	$4.95	$4.45	$3.95
Black	29 x 14	HK7011	$5.95	$5.35	$4.75

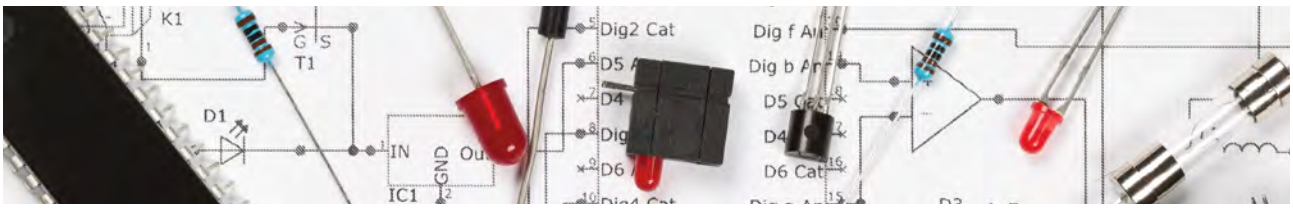
BLACK PLASTIC WITH ALUMINIUM INSERT

White pointers - brass insert.
Grub screw fixing.
Suit 0.25"/6.35mm shaft.
Lifetime warranty on all knobs!

LIFETIME GUARANTEE

Colour	Ø x H (mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
Silver/Black	20 x 18	HK7786	$2.85	$2.53	$2.23
Silver/Black	27 x 15	HK7740	$2.50	$2.25	$2.00
Silver/Black	32 x 17	HK7741	$2.95	$2.65	$2.35
Silver/Black	45 x 20	HK7742	$3.95	$3.55	$3.15

Not Sure What To Buy?
Give a Jaycar Gift Card and let them choose!



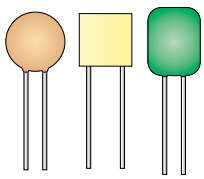
CAPACITORS

Capacitor Magnitudes

Capacitors will generally have their value printed on them. Smaller capacitors, including plastic film, ceramic and monolythic, use the EIA coding system, which we outline below.

Microfarads (µF)	Nanofarads (nF)	Picofarads (pF)	EIA code
-	0.001nF	1pF	-
-	0.01nF	10pF	100
-	0.1nF	100pF	101
-	0.22nF	220pF	221
0.001µF	1nF	1000pF	102
0.0047uF	4.7nF	4700pF	472
0.01µF	10nF	-	103
0.047µF	47nF	-	473
0.1µF	100nF		104
0.47µF	470nF	-	474
1µF	1000nF	-	105
10µF	10000nF	-	106

Capacitor EIA Codes



Smaller capacitors, including plastic film, ceramic and monolythic, use the EIA coding system, an acronym for Electronic Industries Alliance. A bit like resistor colour coding but in digits, the first two digits followed by a multiplier, showing the number of zeros. With this code, the value is generally given in picofarads (pf), which you'll need to divide by either one million or one thousand (respectively) if you want the values in microfarads (µF) or nanofarads (nF).

For example

104 means 10 with 4 zeros = 100,000pF, 100nF or 0.1µF

681 means 68 with 1 zero = 680pF

472 means 47 with 1 zeros = 4700pF, 4.7nF

Alternatively, the value may be given directly in nanofarads, with three significant digits but the third generally 0. In this case, there's generally also a small 'n', which can be used in place of a decimal point.

220n means 220nF, 0.22µF, and 3n3 means 3.3nF (3300pF)

Capacitor Tolerance Marking Codes

Many capacitors also have a capital letter to indicate their tolerance rating, according to the following code system:

eg. 104K = 0.1µF ±10% or 4n7J = 4.7nF ±5%

Marking	E	F	G	J	K	M
Tolerance	±0.5%	±1%	±2%	±5%	±10%	±20%

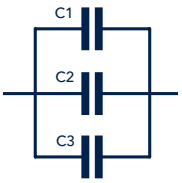
Capacitors in Series

Capacitors in series can always be calculated with the same formula for resistors in parallel, 2 or more.

Note: The new value will always be lower.

$$C\ total = \frac{1}{\frac{1}{C1} + \frac{1}{C2} + \frac{1}{C3} \ldots}$$

Capacitors in Parallel

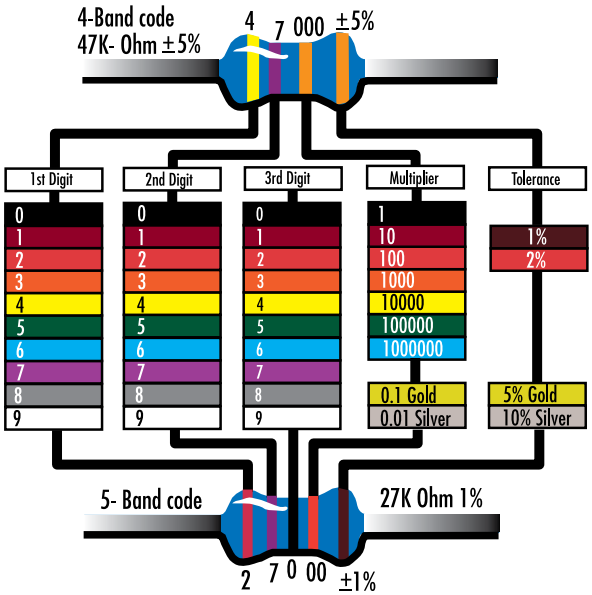


When capacitors are placed in parallel, they can simply be added together.

C total = C1 + C2 + C3...

RESISTORS

Resistor Colour Codes



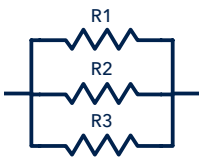
Resistors in Series

When two or more resistors are placed in series, (in line with each other), the overall resistance of the resistor network will change.

Note: The new value will always be higher.

R total = R1 + R2 + R3... eg. 47Ω + 68Ω + 100Ω = 215Ω (220Ω)

Resistors in Parallel



Calculating resistors in parallel is a little more complicated than resistors in series.

Note: The new value will always be lower.

Two resistors in parallel:

$$R\ total = \frac{R1 \times R2}{R1 + R2} \quad eg. \quad \frac{2.7K \times 3.3K}{2.7K + 3.3K} = \frac{8.91}{6} = 1.485K \text{ (close to 1.5KΩ)}$$

More than two resistors in parallel:

$$R\ total = \frac{1}{\left(\frac{1}{R1} + \frac{1}{R2} + \frac{1}{R3}\right)} \quad eg. \quad \frac{1}{\left(\frac{1}{47\Omega} + \frac{1}{68\Omega} + \frac{1}{100\Omega}\right)} = \frac{1}{0.046} = 21.74\Omega \text{ (close to 22Ω)}$$

For this working example, a 22Ω resistor could be made putting 47Ω, 68Ω and 100Ω resistors in parallel.

Ohm's Law

The relationship between resistance, voltage and current are defined by Ohm's Law. The formula are:

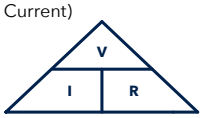
V = I x R (Voltage = Current multiplied by Resistance)

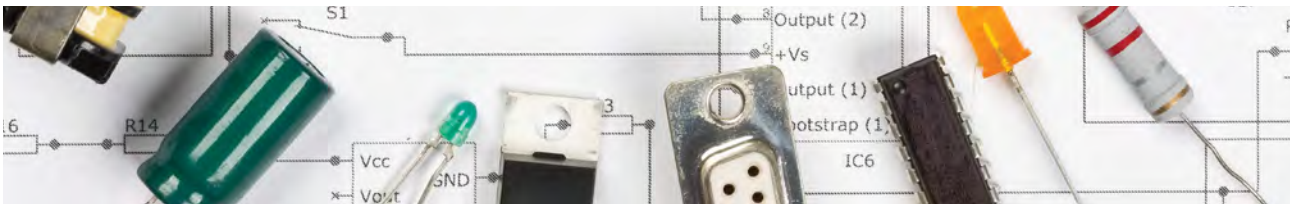
I = V / R (Current = Voltage divided by Resistance)

R = V / I (Resistance = Voltage divided by Current)

where V is Volts, I is Amps and R is Ohms.

An easier way to remember Ohm's Law is by this diagram. Just cover the value you are looking for, and the formula shows.

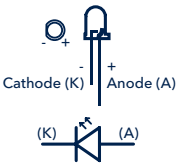




DIODES

Light Emitting Diodes (LEDs)

Light emitting diodes light up when a voltage is applied. As a general rule, the longest lead is the positive (anode), and the negative (Cathode) generally has a flat edge in the LED's body.

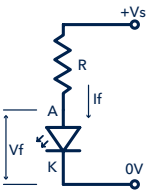


Light Emitting Diodes (LEDs)

A resistor in series with an LED is required to limit the current to an LED. Too much current will cause the LED to fail permanatently. We have provided resistor values required for 5V, 9V or 12VDC in the tables on pages A187 and A188. Alternatively, you can use the following formula.

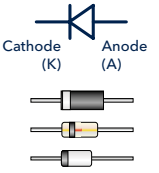
$R = \frac{Vs - Vf}{If}$ eg. $\frac{6V - 2V}{0.02} = 200\Omega$

where:
R = Ω (Ohms)
Vs = Voltage source (Volts)
Vf = LED Forward voltage (Volts)
If = LED Forward current (Amps)
In the example above, a 200Ω resistor is required to power an LED that has a Vf of 2V and If of 20mA



Signal and Power Diodes

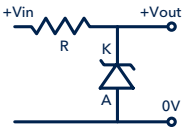
Diodes are used to rectify current, and also to detect signals. They are generally rated in terms of voltage and current. Most diodes are 3-10mm long and cylindrical. They may be black or clear. Diodes are always polarised. The positive or cathode is marked with a black or silver stripe.
You can check whether or not a diode is destroyed by measuring its resistance with an ohmmeter. If the diode is OK, it will have an extremely high resistance in one direction. When testing, don't touch the leads with your fingers. This will give misleading readings.



Zener Diodes

A Zener diode works like a normal diode in the FORWARD direction, but when voltage is applied in the REVERSE direction it does something really useful. At a specified reverse voltage it starts to conduct. In other words, if you apply, say 12V (for a 12V Zener) across the diode it will start to conduct current.
See diagram: When the Zener starts to draw current, this has the effect of regulating the positive (+) voltage. Note: As the Zener draws current, this will turn into heat. The Zener therefore has a wattage rating (as well as its Zener voltage rating) this may not be exceeded. Jaycar carries a range of Zener diodes from 3.3V to 75V.

Fig 1. As positive (+) voltage climbs up to 12 volts the 12V Zener starts to conduct, drawing current



Product Data:

We have so much data and fact sheets, we cannot fit it all in our catalogue. Check out our website for over 4,000 pages of data!

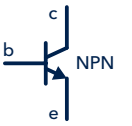
TRANSISTORS

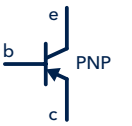
Transistors

Transistors are used to amplify and switch signals. They have three terminals:

Base (b) Collector (c) Emitter (e)

A transistor has only 'one way round'. If you solder it the wrong way round, there is a good chance that it will be destroyed the moment power is applied to it. Care is necessary when soldering transistors in circuit. Take extra care to identify the terminals. Quite similar looking transistors commonly have completely different lead connections. Make sure you follow the component overlay and mount them correctly on the PC board.





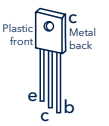
Pinouts for General Purpose Transistors

Base (b) Collector (c) Emitter (e)

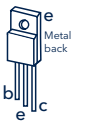
2N3904 / 6
MPSA06
PN100 / 200

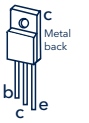
BC546 / 7 / 8 / 9
BC550 / 6 / 7 / 8 / 9
BC327 / 337
2N2907 / 2222A
MPSA13 / 14

BC639 / 640



BD681 / 682
BD135 / 6 / 7 / 9
BD140
MJE340 / 350
BF469 / 470 / 1 / 2



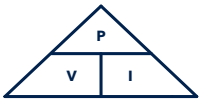


BD649 / 650
TIP31 / 32
TIP41 / 42
TIP122
MJE2955 / 3055

POWER

Power in DC Circuits

When power is dissipated in a circuit, heat is created. The amount of heat is expressed in watts, whether it's from your electric kettle, a radiator or your Hi-Fi amplifier. The basic formula is:



P = V x I

where P is power in Watts, V is potential difference in Volts, and I is current in Amps.

Just like Ohm's Law, this can be trasposed to:

V = P / I (Voltage = Power divided by Current)
I = P / V (Current = Power divided by Voltage)
R = V / I (Resistance = Voltage divided by Current)

Other useful formulas relating power, voltage, current & resistance are:

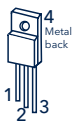
$P = I^2 \times R$, $P = V^2 / R$, $R = V^2 \times P$, $R = (P / I)^2$, $V = \sqrt{(P \times R)}$, $I = \sqrt{(P / R)}$

VOLTAGE REGULATORS

Fixed Voltage Regulators

Used to maintain a constant voltage.

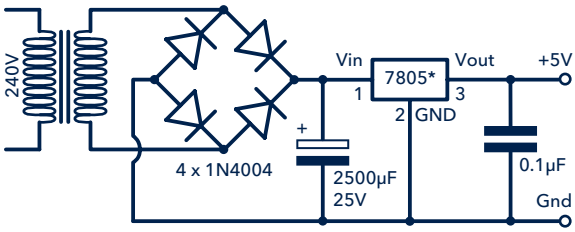
78Lxx 100mA
fixed voltage regulator (+)
1 - Output
2 - Common GND
3 - Input



78xx 1A
fixed voltage regulator (+)
1 - Input
2 - Common GND
3 - Output
4 - Common GND

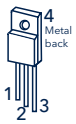
79xx 1A
fixed voltage regulator (-)
1 - Common GND
2 - Input
3 - Output
4 - Input

This circuit outputs +5VDC from an AC input. For a negative supply, simply reverse bridge rectifier and 2500µF filter capacitor and use a 7905 regulator.



WARNING:
Mains electricity is dangerous and can cause electrocution or death. Only qualified electricians can work with voltages above 50VAC.

Variable Voltage Regulators



317T 1.5A adjustable
voltage regulator (+)
1 - Adjust
2 - Output
3 - Input
4 - Output

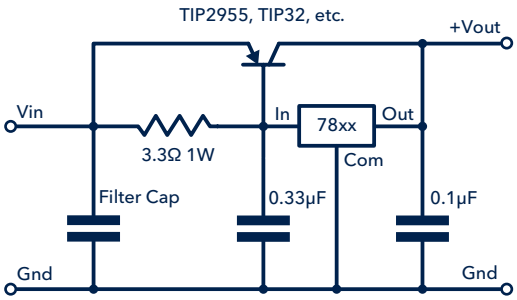
337T 1.5A adjustable
voltage regulator (-)
1 - Adjust
2 - Input
3 - Output
4 - Input

Increasing the Output Current of the Regulator

If more than one amp of constant current is needed, this can be accomplished by using a higher current fixed regulator or by using a series pass power transistor.

By adding a PNP power transistor to a positive regulator, the output current increases above the normal rating of the regulator. To deliver in excess of 4 Amps, see the circuit shown here using a TIP2955 or TIP32. The pass transistor must be mounted on a heatsink.

With a negative regulator, the same conditions can exist but the polarity of the pass transistor would be an NPN, such as a 2N3055.



Variable Power Supply using an LM317 Voltage Regulator

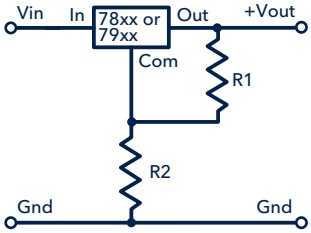
If two additional resistors are added to a circuit (as shown here), regulators like the 7805 can be made to give a higher output voltage.

R1 =Vr/0.02
R2 =Vb/0.025
Vr =normal regulated output
Vb =amount by which regulator is boosted above Vr

For example:

Vout	Regulator	R1	R2
6V	5V	220Ω	39Ω
9V	5V	220Ω	150Ω
13.8V	12V	560Ω	68Ω
18V	15V	680Ω	120Ω

To make a variable regulator, use a pot as R2.



Variable Power Supply using an LM317 Voltage Regulator

This circuit, with a fixed resistor inside the dotted box, enables R1 and R2 to determine the voltage of a regulated power supply. R1 and R2 basically form a voltage divider across the output voltage. Manufaturer's datasheets tell us that hte regulator needs a nominal 1.25V across R1. In all practical cases, the resistor is 120Ω. R2 then effectively sets the output voltage. R2 can be calculated like so:

R2 = (96 x Vout) - R1

Vout can be calculated thus:

$$Vout = (1 + \frac{R2}{R1})\ Vref$$

If we needed, say, 18V output:

R2 = (96 x 18) - 120 = 1728 - 120 = 1608Ω

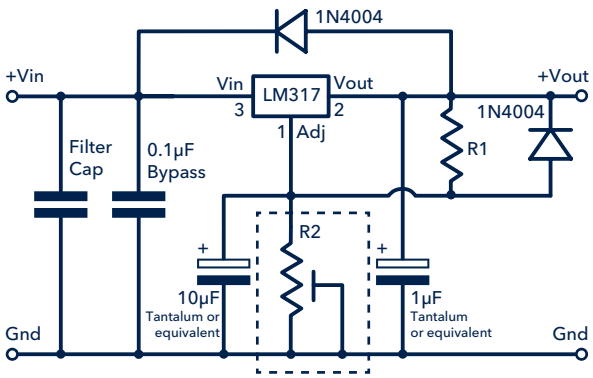
$$Vout = (1 + \frac{1608}{120})\ Vref = (1 + 13.4) \times 1.25 = 14.4 \times 1.25 = 18$$

In all cases, Vin must exceed Vout by at least 2.5V, but the greater the input margin in excess of 2.5V, the greater the dissipation in the regulator device itself. For fixed outputs therefore, proper selection of DC source voltage will minimise the dissipation.

Note: The capacitors in the circuit are used for ripple rejection and to keep the circuit from oscillating (ringing). They should be mounted as close to the regulator and ground as possible, along with R1. The diodes protect the IC from short circuits at Vout or Vin.

For applications where the output voltage must be varied, such as a bench power supply, R2 must become a trimmer or full rotary potentiometer. Whilst the 317 will cope with a range of 1.5V to 37V, practical limitations prevent this from happening at full current.

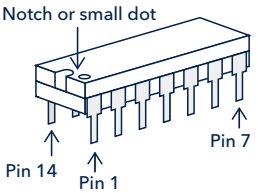
This circuit is the simplest configuration for a variable power supply. R2 can nominally be 5KΩ in this case. Dissipation in the 317 will become excessive when Vin exceeds Vout by more than 13V at 1.5A.



INTEGRATED CIRCUITS

Pinout Guide

Pin 1 of a DIL (Dual In Line) Integrated Circuit is identified by the notch or small dot moulded into the IC. The pin assignments increment in a counter-clockwise direction.



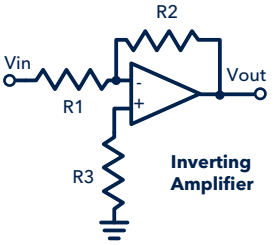
Standard Op-Amp Configurations

Inverting Amplifier
Vout = -R2/R1 x Vin
R3 = R1 in parallel with R2
R1 = Input Impedance

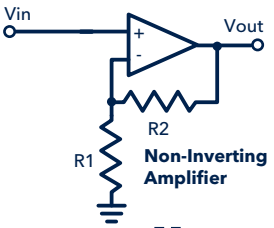
Non-Inverting Amplifier
Vout = R1 + R2/R1 x Vin
Make R1 in parallel with R2 equal to source resistance.

Low Pass Filter
Corner Freq. (Cf)= 1 / (2π x R3 x C)
Unity Gain Freq. = 1 / (2π x R1 x C)
R2 = R1 in parallel with R3.

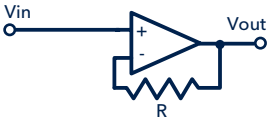
Voltage Follower
Vout = Vin
Make R = Source Resistance.



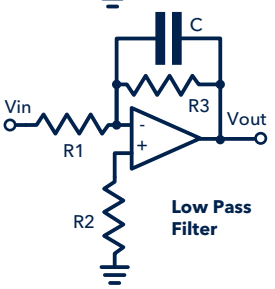
Inverting Amplifier



Non-Inverting Amplifier



Voltage Follower



Low Pass Filter

Logic ICs - Basic Logic Functions

AND

A	B	Q
0	0	0
0	1	0
1	0	0
1	1	1

NAND

A	B	Q
0	0	1
0	1	1
1	0	1
1	1	0

OR

A	B	Q
0	0	0
0	1	1
1	0	1
1	1	1

NOR

A	B	Q
0	0	1
0	1	0
1	0	0
1	1	0

XOR

A	B	Q
0	0	0
0	1	1
1	0	1
1	1	0

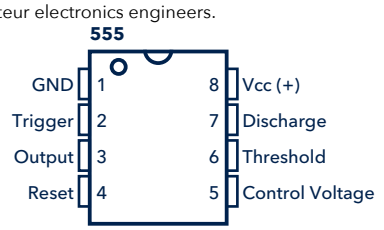
XNOR

A	B	Q
0	0	1
0	1	0
1	0	0
1	1	1

555 Timer

The 555 timer has proven to be one of the most useful devices for both the professional and amateur electronics engineers.

The 555 timer can be made to operate in various ways. The most common are to supply continuous pulses (called an astable or oscillator) or to supply single pulses (called a monostable or one-shot).

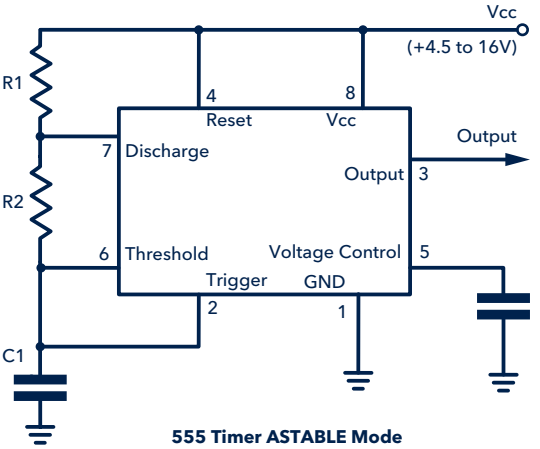


Astable Mode

The ratio of the two resistors (R1 and R2) and the values of R1, R2 and C1 normally determine both the frequency of oscillation and the duty cycle. The formulas are:

Output high time (T1) = 0.693 x (R1 + R2) x C1
Output low time (T2) = 0.693 x R2 x C1
Oscillation frequency (f) = 1.44/((R1 + 2 x R2) x C1)

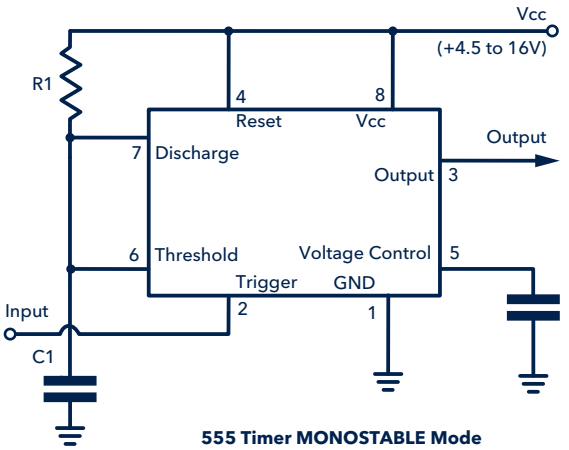
where R is in Ohms, C is in Farads and T is in seconds.



555 Timer ASTABLE Mode

Monostable Mode

One of the main uses for a monostable (also known as a one-shot) is to stretch pulses. The circuit delivers a single pulse at pin 3 each time a trigger pulse is applied to the input. The IC uses the one third supply and two thirds supply voltages as trigger points. Time delays ranging from microseconds to seconds are possible.



555 Timer MONOSTABLE Mode

DATA - METRIC TO IMPERIAL

LENGTH

Metric	Imperial	Symbol or Abbreviation	Scale or Conversion
Angstrom Micrometre -	- - Microinch	A µm µin	10^{-10}m 10^{-6}m 0.0254µm
- Millimetre Centimetre	Thou, Mil, milli-inch - -	- mm cm	25.4µm, 0.001in 0.03937 inch (in) 0.3937 inch (in)
- - -	Inch Foot Yard	in or " ft or ' yd(s)	25.4mm 304.8mm 914.4mm (0.9144m)
Metre (SI) - -	- Fathom Chain	m - ch	1,000mm, 1.094yd, 3.28ft 6ft, 1.8288m 22yd, 20.1168m, 0.0125mi
- - Kilometre	Furlong Mile (Statute) -	- mi km	220yd, 0.2012km, 10ch, 0.125m 1.6093km, 1,760yds. 1,000m, 0.621m, 3281ft, 0.540Nm
- - Parsec	Nautical Mile Lightyear -	Nm 1yr pc	1,852km, 1.15mi 9,460,730,472,581km 4.262 light years, 3.0857×10^{16}m

AREA

Metric	Imperial	Symbol or Abbreviation	Scale or Conversion
- Sq. Centimetre -	Circular Mil - Square inch	- cm^2 in^2	506.707µm^2 0.135in^2 6.45cm^2, 645.16mm^2
- - Sq. Metre	Square foot Square yard -	ft^2 yd^2 m^2	0.092903m^2, 929cm^2 0.836127m^2 1.2yd^2, 10,000cm^2
- Hectare Sq. Kilometre	Acre - -	ac ha km^2	4840yd^2, 4047m^2, 0.4047ha 2.47ac, 10,000m^2 0.386mi^2, 1,000,000m^2
-	Sq. Mile	mi^2	2.5899km^2, 3,097,600yd^2

MASS

Metric	Imperial	Symbol or Abbreviation	Scale or Conversion
Milligram - Carat	- Grain -	mg gr k	0.001g, 0.01538gr 64.79891mg, 0.323995k 0.2g
- - -	Dram (avoirdupois) Dram (US) Pennyweight	dr k -	1.77185g, 0.0625oz 60gr, 0.0039kg 24gr, 0.05troz
Gram - -	- Ounce Troy ounce	g oz tr oz	0.0352oz, 5k, 1.555pennyweight 28.3495g, 0.0625lb 31.103477g
- Kilogram (SI) -	Pound - Stone	lb kg st	453.5923745g, 16oz 2.205lb 6.3502932kg, 14lb
- - -	Quarter Slug Central	qr - -	12.7006kg, 2st, 28lb 14.5939kg, (Fps unit of mass) 110lb, 49.886kg
Tonne - -	- Ton Ton(US)	t t t	1,000kg, 2205lb 1016.05kg, 2240lb 907.18kg, 2,000lb

VOLUME

Metric	Imperial	Symbol or Abbreviation	Scale or Conversion
Millilitre - -	- Cubic inch Fluid ounce	mL in^3 Fl.oz.	0.0610in^3, 0.0352 Fl.oz. 16.387mL 28.413mL
- Litre -	Pint - -	pt L -	568mL, 16 Fl.oz. 1,000mL, 1.76pt, 0.220imp.gal. 0.264US gal
- - -	Quart US Gallon Gallon (Imperial)	qt US gal gal	1.1365L, 40Fl.oz., 2.5pt 3.7879L, 0.833 imp.gal. 4.55L., 4qt
- - -	Cubic foot Bushnel Cubic yard	cuft bus yd^3	28.316847L 0.0364m^3 0.765m^3
Cubic Metre	-	m^3	1,000L (water), 35.3cuft, 27.5bus, 1.31yd, 220gal

FORCE

Metric	Imperial	Symbol or Abbreviation	Scale or Conversion
Pascal (SI) Millibar Kilopascal	- - -	Pa mb Kpa	1.45 x 10^{-4} psi 0.0295in hg (mercury), 10^3pa 0.145psi, 0.009867Bar
- - -	Pounds per sq.ft Pounds per sq.in I inch of water	lb/ft^2 lb/in^2 -	47.8803Pa 6.89476KPa 249.089Pa
- - Bar	1 foot of water 1 inch Mercury (Hg) -	- - -	2.98907Kpa 3.38639Kpa 10^4 dynes/cm^2, 10^5Pa
Dyne - Newton (SI)	- Poundal -	d pdl N	10^{-5}N, 7.233x10^{-5}pdl, 1.02x10^{-3}g 0.138255N 0.2248lb/ft
- - -	Foot ounce Foot pound Foot ton	oz/ft lb/ft ton. f	0.278014N 4.45N 9.96402kn
Newton Metre -	- Foot pound force/ft	N/m lbF. ft	0.06852 lb/ft 1.35582Nm

ILLUMINATION, ENERGY & WORK

Metric	Imperial	Symbol or Abbreviation	Scale or Conversion
Milli-Candela - Lux (SI)	- Foot candle -	mcd cd/ft^2 lx	10^{-3}cd 10.764Lux, 1m/ft^2 1 lumen/m^2, 0.092892cd/ft^2
Lumen (SI) Lambert Erg	- - -	lm/ft^2 L erg	1 candela / steradian 1lm/cm^3 7.376 x 10^{-8}ft/lb
- Joule Kilojoule	Foot poundal - -	ftpdl J kj	0.042140J 1Nm Newton - mtre 0.948BTu, 0.239cal
Calorie Watt -	- - British Thermal Unit	cal W Btu	4.1868J 0.00134hp, 1J/s, 10^7erg/sec 1.05506kj
- Kilowatt-hour - -	Foot pound - Horse power hour Therm	ftlb kwh h.p.h. therm	0.042140J, 3.766x10^{-7}kwh 3.6mJ, 2.655x10^6ftlb 2.68452mJ 105.506mJ

For next day delivery, or Click and Collect, see page A4

IP RATINGS

The IP rating system provides a means of classifying a piece of electrical or electronic equipment (or sometimes equipment's enclosure) in terms of its protection against various forms of environmental infleuence. The protection is from human interference, dust, water, physical impacts, etc. The IP rating is NOT an electrical standard. The rating is a three-digit number, and the larger the value of each digit, the greater the protection from that influence.

Value	1st Digit Protection against ingress of solid objects	2nd Digit Protection against ingress of liquids	3rd Digit Protection against mechanical impact damage
0	No protection	No protection	No protection
1	Protected against objects over 50mm. eg. hands, large tools	Protected against vertically falling drops of water.	Protected against 0.225 joule impact (150g & 15cm).
2	Protected against solid objects over 12mm. eg. hands, large tools	Protected against direct sprays of water up to 15° from vertical	Protected against 0.375 joule impact (250g & 15cm).
3	Protected against solid objects over 2.5mm. eg. tools, wires, etc.	Protected against direct sprays of water up to 60° from vertical	Protected against 0.5 joule impact (250g & 20cm).
4	Protected against objects over 1mm. eg. tools, small wires, etc.	Protected against water sprayed from any direction. Limited ingress permitted.	-
5	Limited protection against dust ingress (no harmful deposit)	Protected against low pressure water jets from any direction. Limited ingress permitted.	Protected against 2.0 joule impact (500g & 40cm)
6	Totally protected against dust ingress (no harmful deposit)	Protected against strong pressure water jets (eg. ship decks). Limited ingress permitted.	-
7	-	Protected against immersion between 15cm and 1m	Protected against 6.00 joule impact (1.5kg & 40cm)
8	-	Protected against long periods of immersion under pressure	-
9	-	-	Protected against 20 joule impact (5kg & 40cm)

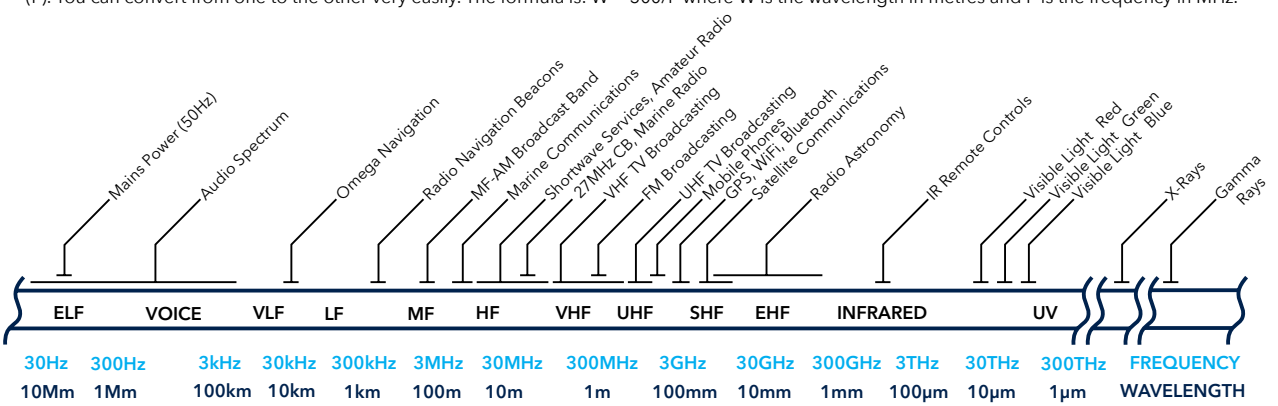
GLOSSARY OF TERMS

Commonly used terms when using microcontrollers, including Arduino and Raspberry Pi.

Term	Definition
Duty cycle	Duty cycle is commonly expressed as a percentage or a ratio, and indicates the amount of time over a certain period that a component is turned on. And a period is the time it takes for a signal to complete an on-and-off cycle. For example, when using a PWM value of 127 (out of a total of 256), you have a 50% duty cycle.
Firmware	Similar to software, however it is stored on non volatile memory and can be executed in place - without being copied in RAM - by a microcontroller. It is used in embedded systems and it is made of machine code instructions. Firmware is usually updateable.
Ground	The point of a circuit where there is 0 potential electrical energy. Without a ground, electricity will not have a place to flow in a circuit.
I2C	I2C - Inter Integrated Circuit - is a two wire serial synchronous bus that provides communication between two Integrated Circuits. The I2C can run at different speeds: 100kbps, 400kbps and 3.4 Mbps. It's also used to connect different boards with the simplicity of wiring only two cables, called SDA (Data line), SCL (Clock line). Can support up to 1008 slave devices.
ICSP	In-Circuit Serial Programming is the ability of a microcontroller to be programmed directly on the board on which it is mounted. It is also a set of signals and pins used for programming.
IDE	Integrated Development Environment. The Arduino® IDE for example, is where users write code to upload to an Arduino® board.
EEPROM	Electrically Erasable Programmable Read-Only Memory and is user-modifiable read-only memory (ROM) that can be erased and reprogrammed (written to) repeatedly. Now generally referred to as "Flash" memory.
Digital IO	Digital Input and Output - refers to binary data flowing into and out of a circuit; the signal is either high(1) or low(0).
Analogue IO	Analog Input and Output - these signals are variable, and have multiple states. Analog input signals can represent - temperature or level or rate of flow.
GPIO	Stands for "General Purpose Input/Output." GPIO is a type of pin found on an integrated circuit that does not have a specific function. While most pins have a dedicated purpose, such as sending a signal to a certain component, the function of a GPIO pin is customizable and can be controlled by software.
RS232	RS-232 is a standard communication protocol for linking a computer and its peripheral devices to allow serial data exchange.
RAM	Random Access Memory. It is a fast memory that offers both read and write capabilities. RAM is a volatile memory and requires power to keep the data accessible. If the computer is turned off, all data contained in RAM is lost.
ROM	Read Only Memory. Data that normally can only be read, not written to. ROM contains the programming that allows your computer to be "booted up" or regenerated each time you turn it on. Unlike a computer's random access memory (RAM), the data in ROM is not lost when the computer power is turned off.

WAVELENGTH, FREQUENCY AND THE EM SPECTRUM

Radio waves, light and heat radiation are all examples of electromagnetic (EM) radiation and differ only in terms of their wavelength (W) and frequency (F). You can convert from one to the other very easily. The formula is: W = 300/F where W is the wavelength in metres and F is the frequency in MHz.



CABLE & CONNECTORS

CONNECTORS:

2.5, 3.5, 6.5mm - Audio	A233
Adaptors - RCA	A232
Adaptors - DC Power	A258
Amphenol Connectors	A238
Anderson Type Connectors	A256
Automotive (250 Series)	A257
Banana	A236
Battery Clamps	B86
Belling-Lee Connectors	A242
Binding Posts	A236
BNC	A244
Cannon - see Amphenol	A238
Car Radio	B196
Ceramic Terminal Blocks	A251
Cigarette Lighter Adaptors	B90
Coaxial	A242
Crimp Lugs	A253
D Connectors & Backshells	A248
DC Power	A258
Deutsch	A257
DIL Jumpers	A250
DIN Connectors	A241
Disk Drive Connectors	A249
EZ Hooks	A66
FME Connectors	A243
F-Type	A243
HDMI	A246
Header Terminals	A250
High Current Connectors	A256
IDC Headers	A250
Jumper Shunts	A250
Merit Plugs	B90
Modular	B270
Molex	A257
Motorola Type	B196
NBN Battery Connector	A259
N-Type Connectors	A253
Neutrik™ Plugs & Sockets	A235
PAL Connectors	A242
PCB Mount Terminals	A251
Phono	A233
Quick Connectors	A254
RCA	A231
Ribbon Cable Connectors	A250
RJ12, 45 Adaptors	B270
Self-Sealing QCs	A254
SMA	A247
Solder Tags, Lugs	A249
Speaker Terminals	A237
Speakon	A238
S-Video	A240
Tagboard, Tagstrip	A250
Telephone	B270
Telephone Wallplate	B271
Terminal Blocks	A252
TNC	A243
TOSLINK Adaptors	B169
TV Antenna	A242
UHF	A247
USB	A246
Valve Sockets	A204
Wallplates & Inserts AV/IT	A240
XLR Connectors (mini)	A239
XLR	A239

WIRE & CABLE:

AC Mains Cable	A225
Alarm Cable	A230
Audio & Video Cable	A228
Cable Ties	A264
Coaxial Cable	A229
Communication Cable	A230
Data Cable	A230
DC Power Cable	A224
Fasteners	A265
Heatshrink	A260
Hookup Wire	A226
Microphone Cable	A228
Screened AV Cable	A228
Solar Cable	A225
Speaker Cable	A227
Telephone Cable	A229
Trailer Cable	A226

QUALITY MATTERS

We often overlook the hardware that connects our appliances, our speakers, or feed our movie streaming from the router to the TV.

Often considered unsightly, with much effort to conceal them, there's much more than meets the eye to the humble length of cable.

Especially in today's electrically noisy environments, quality makes a difference. That's why you'll find such a huge range of cable, and associated connectors.

There are budget options for those less sensitive projects, through to the most premium cable and connectors for the discerning audiophile or performance critical application.

We've been selling quality hardware in this space for 40-years. We know what works, so you can trust our products, unreservedly.

Tech talk

HIGH CURRENT - GENERAL PURPOSE SINGLE CORE - BY THE METRE OR ROLL

15 Amp Tinned

Flexible DC tinned copper power cable suitable for general purpose automotive and marine applications.

RED: WH3073

BLACK: WH3075

Sold by the metre or by the roll.

Specifications	WH3073 & WH3075
Current Capacity	15A
Conductor mm2	1.84mm²
Conductor Material	Tinned Copper
AWG	15
Stranding	26 x 0.3mmTC
Insulation	PVC
Resistance (20˚C)	0.0108 Ω/m
Wire Dia.	1.53mm
Overall Dia.	3.2mm
Roll Length	100m

Cat.	Per Metre	1+ Roll	5+ Rolls
WH3073	$1.65	$139.00	$129.00
WH3075	$1.65	$139.00	$129.00

25 Amp Tinned

Ideal for most automotive wiring. Tinned for corrosion prevention in marine applications.

RED: WH3080

BLACK: WH3082

Sold by the metre or by the roll.

Specifications	WH3080 & WH3082
Current Capacity	25A
Conductor mm2	2.9mm²
Conductor Material	Tinned Copper
AWG	12
Stranding	41 x 0.3mm TC
Insulation	PVC
Resistance (20˚C)	0.0059 Ω/m
Wire Dia.	1.99mm
Overall Dia.	3.35mm
Roll Length	100m

Cat.	Per Metre	1+ Roll	5+ Rolls
WH3080	$3.25	$279.00	$249.00
WH3082	$3.25	$279.00	$249.00

40 Amp Tinned

Ideal for most automotive wiring. Tinned for corrosion prevention in marine applications.

Product will differ slightly to one shown

RED: WH3068

BLACK: WH3069

Sold by the metre or by the roll.

NEW

Specifications	WH3068 & WH3069
Current Capacity	40A
Conductor mm2	5.22mm²
Conductor Material	Tinned Copper
AWG	10
Stranding	7 x 66 x 0.12mm TC
Insulation	PVC
Resistance (20˚C)	0.0033 Ω/m
Wire Dia.	2.58mm
Overall Dia.	5.5mm
Roll Length	100m

Cat.	Per Metre	1+ Roll	5+ Rolls
WH3068	$4.25	$369.00	$319.00
WH3069	$4.25	$369.00	$319.00

56A 8 Gauge OFC High Current

Good for all but the biggest car amplifiers etc.

RED: WH3060

BLACK: WH3062

Sold by the metre or by the roll.

Specifications	WH3060 & WH3062
Current Capacity	56A
Conductor mm2	7.5mm²
Conductor Material	OFC
AWG	8
Stranding	7 x 95/0.12mm
Insulation	PVC
Resistance (20˚C)	0.00252 Ω/m
Wire Dia.	4.05mm
Overall Dia.	6.5mm
Roll Length	100m

Cat.	Per Metre	1+ Roll	5+ Rolls
WH3060	$5.25	$449.00	$399.00
WH3062	$5.25	$449.00	$399.00

100A 4 Gauge OFC Super High Current

Run from your battery to distribution boxes and then the 8GA to amps etc.

RED: WH3064

BLACK: WH3066

Sold by the metre or by the roll.

Specifications	WH3064 & WH3066
Current Capacity	100A
Conductor mm2	21mm²
Conductor Material	OFC
AWG	4
Stranding	7 x 7 x 34/0.127mm
Insulation	PVC
Resistance (20˚C)	0.00097 Ω/m
Wire Dia.	7.70mm
Overall Dia.	10mm
Roll Length	50m

Cat.	Per Metre	1+ Roll	5+ Rolls
WH3064	$14.95	$609.00	$549.00
WH3066	$14.95	$609.00	$549.00

150A 2 Gauge OFC Ultra High Current

Run from your car battery to distribution boxes and then 8GA or 4GA to amps, etc.

RED: WH3070

BLACK: WH3072

Sold by the metre or by the roll.

Specifications	WH3070 & WH3072
Current Capacity	150A
Conductor mm2	31mm²
Conductor Material	OFC
AWG	2
Stranding	145 x 19/0.12mm
Insulation	PVC
Resistance (20˚C)	0.0007 Ω/m
Wire Dia.	8.3mm
Overall Dia.	13mm
Roll Length	30m

Cat.	Per Metre	1+ Roll	5+ Rolls
WH3070	$20.95	$539.00	$479.00
WH3072	$20.95	$539.00	$479.00

HIGH CURRENT - GENERAL PURPOSE - 10 METRE HANDY PACKS

7.5 Amp Tinned - 10m Handy Packs

Flexible heavy duty tinned copper cable suitable for general purpose wiring up to 250V supplied on an easy to use handy pack 10m reel. Suitable for use in marine.

RED: WH3045 BLACK: WH3046
GREEN: WH3047

Specifications	ALL MODELS
Rated Current	7.5A
Conductor Dia.	0.97mm
Conductor mm2	0.75mm²
AWG	18/19
Stranding	24 x 0.2mmTC
Insulation	PVC
Resistance (20˚C)	0.0237 ohm/m
Overall Dia.	2.4mm
Roll Length	10m

Standard PVC insulation +80°C

Cat.	Qty 1+	Qty 4+	Qty 10+
WH3045	$5.95	$5.35	$4.75
WH3046	$5.95	$5.35	$4.75
WH3047	$5.95	$5.35	$4.75

7.5 Amp Tinned - Heavy Duty Silicone 10m Handy Packs

Silicone rubber insulation, very flexible with high temperature rating. Max temperature 180˚C.

- Roll Length 10m

RED: WH3035

BLACK: WH3037

Cat.	Qty 1+	Qty 4+	Qty 10+
WH3035	$14.95	$13.45	$11.95
WH3037	$14.95	$13.45	$11.95

p.A226 - light duty hook-up cable

OFC

What does "OFC" mean? It means OXYGEN FREE COPPER. It's a purer form of copper metal.

15 Amp Tinned - 10m Handy Packs

Flexible DC tinned copper power cable suitable for general purpose automotive and marine applications. Supplied on an easy to use 10m handy pack reel and available in three colours.

- Tinned copper cable

RED: WH3054
BLACK: WH3055
GREEN: WH3056

Specifications	ALL MODELS
Rated Current	15A
AWG	16
Stranding	26 x 0.3mm
Insulation	PVC
Maximum Temp.	80˚C
Overall Dia.	3.3mm
Roll Length	10m

Standard PVC insulation +80°C

Cat.	Qty 1+	Qty 4+	Qty 10+
WH3054	$13.95	$12.45	$10.95
WH3055	$13.95	$12.45	$10.95
WH3056	$13.95	$12.45	$10.95

SINGLE CORE CONTINUED

200A 0 Gauge OFC Ultra High Current

Run from your battery to distribution blocks and then 2GA, 4GA or 8GA to your amplifiers or other power equipment for seriously high current applications.

RED: WH3092
BLACK: WH3094

Sold by the metre or by the roll.

Specifications	WH3092 & WH3094
Current Capacity	200A
Conductor mm2	44mm²
Conductor Material	OFC
AWG	0
Stranding	7 x 7 x 81/0.12mm
Insulation	PVC
Resistance (20˚C)	350 µΩ/m
Wire Dia.	12.2mm
Overall Dia.	15mm
Roll Length	25m

	Cat.	Per Metre	1+ Roll	5+ Rolls
	WH3092	$32.95	$709.00	$609.00
	WH3094	$32.95	$709.00	$609.00

SOLAR SYSTEM CABLE

UV Stabilised Solar Power Cable - by the metre

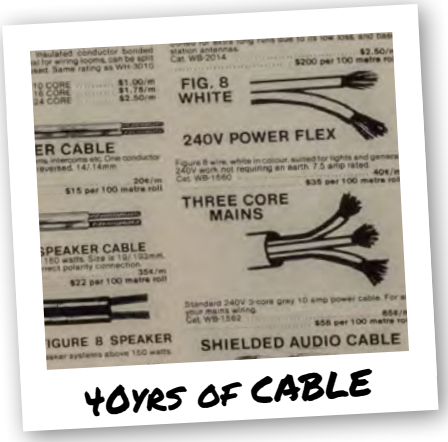
Very tough cable, specifically for the rigors of outdoor use in solar panel installations. Dust, age and UV resistant, tinned copper conductors to minimise corrosion. Use with our PV connectors for complete environmental protection.

TÜV CERTIFIED

Sold by the metre or by the roll. WH3121 WH3122

Specifications	WH3121	WH3122
Rated Current	50A	70A
Conductor Area	4.0mm²	6.0mm²
Conductor Material	Tin plate copper, Class 5	
Rated Voltage	1000VDC	
Temp Range	-40°C to +125°C	
Ingress Protection	IP65	
Insulation Material	XLPC	
TUV Certification	2 PfG 1161/01.06	
Roll Length	100m	

Cat.	Per Metre	1+ Roll	5+ Rolls
WH3121	$4.50	$389.00	$339.00
WH3122	$6.50	$559.00	$489.00



HIGH CURRENT - GENERAL PURPOSE 2 CORE - BY THE METRE OR ROLL

7.5 Amp 2 Core Tinned DC Power Cable

Double insulated 2 core power cable suitable for auto & boating applications. Tinned copper cable suitable for use in marine applications. Sold by the metre or 10m handy pack or 30m roll pack. PVC Insulation.

- Resistance (20˚C): 0.024 ohm/m
- Max Temp.: 80˚C
- Dimensions: 5(W) x 3.2(H)mm

WH3057
- 100m Roll

WH3049
- 10m Roll

WH3053
- 30m Roll

Sold by the metre or by the roll.

Cat.	Per Metre	1+ Roll	5+ Rolls
WH3057	$1.80	$159.00	$139.00
Cat.	**Qty 1+**	**Qty 4+**	**Qty 10+**
WH3049	$16.95	$14.95	$13.45
WH3053	$42.95	$37.95	$33.95

15 Amp Tinned

Double insulated 2 core tinned power cable suitable for automotive and marine applications (PVC + 48 x 0.2mm2) x 2. PVC Insulation.

- Resistance (20˚C): 0.0123 ohm/m
- Max Temp.: 80˚C
- Dimensions: 4.5 x 7.2mm

WH3079
- 100m Roll, sold by the metre or roll

WH3077
- 30m Roll, sold by the roll only

Sold by the metre or by the roll.

Cat.	Per Metre	1+ Roll	5+ Rolls
WH3079	$3.25	$279.00	$249.00
Cat.	**Qty 1+**	**Qty 4+**	**Qty 10+**
WH3077	$84.95	$75.95	$67.95

25 Amp Figure-8 Tinned - by the metre

Ideal for most auto, marine, or general purpose wiring. Twin core for positive and negative connections. Tinned copper conductors. PVC Insulation.

- Resistance (20˚C): 0.0053 ohm/m
- Max Temp.: 80˚C
- 3.5mm (outside dia)

100m roll.

Sold by the metre or by the roll.

Cat.	Per Metre	1+ Roll	5+ Rolls
WH3087	$5.50	$469.00	$419.00

56 Amp Figure-8 Tinned - by the metre

For higher current applications where twin core cabling is required. Red & black colour for easy identification. PVC Insulation.

- Resistance: (20˚C): 0.0024 ohm/m
- Max Temp.: 80˚C
- Dimensions: 6.7 x 13.6mm

50m roll.

Sold by the metre or by the roll.

Cat.	Per Metre	1+ Roll	5+ Rolls
WH3063	$10.95	$469.00	$419.00

90 Amp Figure-8 Tinned - by the metre

For even higher current applications where twin core cabling is required. Red & black colour for easy identification. PVC Insulation.

- Resistance: (20˚C): 0.0013 ohm/m
- Max. Temp.: 80˚C
- Dimensions: 8.5 x 17.0mm

Sold by the metre or by the roll.

Cat.	Per Metre	1+ Roll	5+ Rolls
WH3067	$17.95	$769.00	$679.00

AC MAINS CABLE

Two Core Mains Flex

Two-core mains flex cable (no earth) with a white outer PVC jacket. Suitable for general 240V appliances not requiring an earth.

Sold by the metre or by the roll. Cat. WB1560

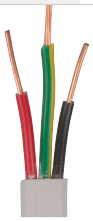
Three Core Mains Flex

Standard 240V 3 core mains flex power cable. White outer PVC jacket. Suitable for extension cables and general 240V appliances where an earth is required.

Sold by the metre or by the roll. Cat. WB1562

Specifications	WB1560	WB1562	WB1565	WB1568
Rated Current	7.5A	10A	10A (Lights)	20A
Type	Flat	Round	Flat	Flat
Stranding	24 x 0.20mm	32 x 0.20mm	1 x 1.13mm	7 x 0.67mm
Approval No.	Q070451	Q080451		
Roll Length	100m			
Active/Neutral	Brown - Active / Blue - Neutral			

Twin & Earth Wiring - Lighting



Twin & Earth Flat Cable
1.00mm² x 2+E
(Lights 10A)
Cat. WB1565

Sold by the metre or by the roll.

Twin & Earth Wiring - Power

Twin & Earth Flat Cable
2.5mm² x 2+E
(Power 20A)
Cat. WB1568

Sold by the metre or by the roll.

CONDUCTOR AREA	Cat.	Per Metre	1+ Roll	5+ Rolls
0.75mm² x 2	WB1560	$1.45	$119.00	$95.00
1.0mm² x 3	WB1562	$2.85	$229.00	$185.00
1.0mm² x 2 + Earth	WB1565	$1.70	$139.00	$109.00
2.5mm² x 2 + Earth	WB1568	$2.95	$239.00	$199.00

PROJECT WIRE

GENERAL PURPOSE POWER

Flexible Light Duty

13 x 0.12mm. Suited for all general purpose wiring. 8 different colours available. PVC insulation.

Rated Current	0.6A
Conductor Dia.	0.42mm
Conductor	0.147mm²
Stranding	13 x 0.12mmTC
Overall Dia.	1.8mm
AWG	25
Roll Length	100m

Red	WH3010
Black	WH3011
Brown	WH3012
Orange	WH3013
Yellow	WH3014
Green	WH3015
Blue	WH3016
White	WH3017

Sold by the metre or by the roll.

	Per Metre	1+ Roll	5+ Rolls
All Types	$0.28	$21.00	$17.00

Heavy Duty

24 x 0.2mm. Suitable for 250V wiring and general heavy duty work. PVC insulation.

Rated Current	7.5A
Conductor Dia.	0.97mm
Conductor	0.75mm²
Stranding	24 x 0.2mm
Overall Dia.	2.4mm
AWG	18/19
Roll Length	100m

Red	WH3040
Black	WH3041
Green	WH3042

Sold by the metre or by the roll.

	Per Metre	1+ Roll	5+ Rolls
All Types	$0.65	$49.00	$39.00

Extra Heavy Duty

32 x 0.2mm. Suitable for 250V wiring and general heavy duty work. PVC insulation.

Rated Current	10A
Conductor Dia.	1.15mm
Conductor	1mm²
Stranding	32 x 0.2mm
Overall Dia.	2.8mm
AWG	17
Roll Length	100m

Brown	WH3050
Blue	WH3052

Sold by the metre or by the roll.

	Per Metre	1+ Roll	5+ Rolls
All Types	$0.95	$69.00	$55.00

HOOK-UP CABLE

Light Duty Silicone Hook Up Wire 8m Handy Packs

This hook-up wire has silicone rubber insulation, which makes it extremely flexible and capable to withstand temperatures from -60°C up to 150°C. Supplied on a handy 8m roll and available with red or black insulation.

Specifications	BOTH
Rated Current	1A
AWG	28
Stranding	7 x 0.1mm
Insulation	Silicone rubber
Maximum Temp.	150°C
Overall Dia.	1.6
Pack Length	8m

Cat.	Qty 1+	Qty 4+	Qty 10+
WH3034	$11.95	$10.45	$9.45
WH3036	$11.95	$10.45	$9.45

Pack of 8 Wire Colours - 25m on each roll

Quality 13 x 0.12mm tinned hook-up wire on plastic spools.

Current Rating	0.6A	Max temp.	70°C
Insulation	PVC	AWG	26
Stranding	13 x 0.12mmTC	Overall Dia.	1.8mm
Resistance (20°C)	0.1365 ohm/m	Roll Length	25m

Cat.	Qty 1+	Qty 4+	Qty 10+
WH3009	$39.95	$35.95	$31.95

Flexible Light Duty - 25 Metre

Quality 13 x 0.12mm tinned hook-up wire on plastic spools.

Current rating	0.6A
Insulation	PVC
Resistance (20°C)	0.1365 Ω/m
Max temp.	70°C
AWG	26
Roll Length	25m

Red	WH3000
Black	WH3001
Brown	WH3002
Orange	WH3003
Yellow	WH3004
Green	WH3005
Blue	WH3006
White	WH3007

	1+ Roll	4+ Rolls	10+ Rolls
Sold Per Roll	$5.95	$5.35	$4.75

Hook Up Cable Packs 2 Metre Lengths

2 metres of 8 different colours of 10 x 0.12mm hook-up cable. Total of 16m of cable.

Cat.	Qty 1+	Qty 5+	Qty 10+
WH3025	$5.95	$5.35	$4.75

TRAILER CABLE - 10M ROLL

Trailer Cable - 10 Metre Roll

A 10 metre length of standard tinned 5 or 7 conductors sheathed in a tough black PVC jacket.

p.B95 range of trailer plugs

Specifications	WH3091	WH3090
Conductor Current	5A	
Cores	5	7
Total Diameter	6.3mm	8.2mm
Roll Length	10m	

Cat.	Qty 1+	Qty 4+	Qty 10+
WH3091	$34.95	$30.95	$27.95
WH3090	$39.95	$35.95	$31.95

SPECIAL APPLICATION

Enamelled Copper Wire

This soft copper wire is coated in a high dielectric strength varnish. You can solder through the enamel, but we recommend that you lightly sandpaper the wire ends with 200+ grit paper to ensure good solder adhesion, especially with RoHS type solder.

MADE IN

LIFE LIFETIME GUARANTEE

mm	B&S	Weight	AWG	Approx Lm	Cat.	Qty 1+	Qty 4+	Qty 10+
0.25	30	25g	33	58	WW4012	$8.95	$8.05	$7.15
0.315	28	25g	31	40	WW4013	$8.95	$8.05	$7.15
0.4	26	25g	28	22	WW4014	$8.95	$8.05	$7.15
0.5	24	100g	25	57	WW4016	$15.95	$13.95	$12.45
0.63	22	100g	23	36	WW4018	$15.95	$13.95	$12.45
0.8	20	100g	21	22	WW4020	$15.95	$13.95	$12.45
1.0	18	100g	19	14	WW4022	$15.95	$13.95	$12.45
1.25	16	100g	18	9	WW4024	$15.95	$13.95	$12.45

Wire Wrap on Spools - 30 Metres

This Kynar wire is high quality silver plated.

- Available in three colours
- Supplied on a 30 metre reel
- Conductor 0.254mm solid
- Insulation PVDF

Roll Length	Colour	Cat.	Qty 1+	Qty 4+	Qty 10+
30m	Red	WW4344	$17.95	$15.95	$13.95
30m	Black	WW4345	$17.95	$15.95	$13.95
30m	Blue	WW4346	$17.95	$15.95	$13.95

Tinned Copper Wire

Two handy sizes of AWG 22 solid copper (0.71mm dia.) for wire links etc.

- Tin plated

Weight	Cat.	Qty 1+
25g	WW4032	$9.95
100g	WW4030	$19.95

Nichrome Resistance Wire - 4 Metres

Used for wiring heating elements such as toasters, etc.

- 80% nickel, 20% chromium.
- Resistance 13.77 ohm per metre.
- Size 28 B&S (0.315mm)
- 4m

LENGTH 4 METRES.

Cat.	Qty 1+
WW4040	$6.95

SPEAKER CABLE - BY THE METRE OR ROLL:

Everyone, at some stage of their life, needs to run a length of wiring to set up a speaker or two. Yes, you may be able to cobble some mains fig.8 flex to do the job - but really, let's get serious. The Jaycar range of speaker cable goes from quite modest to gi-normous! At the modest prices shown below, why not just use the right stuff - with polarisation to boot - to get that job done, neatly & efficiently. Oh, and if you find yourself doing speaker wiring jobs a fair bit, you may be better off buying a spool. It's always there when you need it.

Light Duty Figure 8 14/0.14mm OFC

Ideal for Hi-Fi systems, intercoms, etc. Grey with black trace.

- 100m roll, PVC insulation

Sold by the metre or by the roll.

Specifications	WB1702
Conductor Diameter	0.51mm x 2
Conductor mm2	0.215mm² x 2
AWG	24 x 2
Stranding	(14 x 0.14mm OFC) x 2
Dimensions	1.8mm x 3.6mm

Cat.	Per Metre	1+ Roll	5+ Rolls
WB1702	$0.60	$49.00	$39.00

Regular Duty Figure 8 14/0.20mm

Clear with white trace.

- 100m roll, PVC insulation

Sold by the metre or by the roll.

Specifications	WB1704
Conductor Diameter	0.74mm x 2
Conductor mm2	0.44mm² x 2
AWG	21 x 2
Stranding	(14 x 0.2mm OFC) x 2
Dimensions	2mm x 4mm

Cat.	Per Metre	1+ Roll	5+ Rolls
WB1704	$0.80	$65.00	$49.00

Medium Duty Figure 8 19/0.18mm OFC

Suited to amplifiers up to 150 watts. 19 x 0.18mm. Black with white trace.

- 100m roll, PVC insulation

Sold by the metre or by the roll.

Specifications	WB1706
Conductor Diameter	0.8mm x 2
Conductor mm2	0.483mm² x 2
AWG	20 x 2
Stranding	(19 x 0.18mm OFC) x 2
Dimensions	2.6mm x 5.2mm

Cat.	Per Metre	1+ Roll	5+ Rolls
WB1706	$0.90	$69.00	$59.00

Heavy Duty Figure 8 24/0.20mm OFC

Suited for speaker systems above 150 watts. 24/0.2mm. Clear with black trace.

- 100m roll, PVC insulation

Sold by the metre or by the roll.

Specifications	WB1708
Conductor Diameter	0.97mm x 2
Conductor mm2	0.75mm² x 2
AWG	18/19 x 2
Stranding	(24 x 0.2mm OFC) x 2
Dimensions	2.8mm x 5.6mm

Cat.	Per Metre	1+ Roll	5+ Rolls
WB1708	$1.35	$109.00	$89.00

Extra Heavy Duty Figure 8 41/0.20mm OFC

Clear with white trace.

- 100m roll, PVC insulation

Sold by the metre or by the roll.

Specifications	WB1710
Conductor Diameter	1.29mm x 2
Conductor mm2	1.288mm² x 2
AWG	16 x 2
Stranding	(41 x 0.2mm OFC) x 2
Dimensions	3.2mm x 6.4mm

Cat.	Per Metre	1+ Roll	5+ Rolls
WB1710	$1.95	$159.00	$129.00

Extra Heavy Duty Figure 8 79/0.20mm OFC

Exactly half the wire content of the Jumbo cable but still 3 times thicker than the heavy duty cable. Clear with white trace.

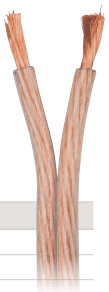
- 100m roll, PVC insulation

Sold by the metre or by the roll.

Specifications	WB1712
Conductor Diameter	1.8mm x 2
Conductor mm2	2.5mm² x 2
AWG	13 x 2
Stranding	(79 x 0.2mm OFC) x 2
Dimensions	4.0mm x 8.0mm

Cat.	Per Metre	1+ Roll	5+ Rolls
WB1712	$3.45	$279.00	$229.00

Jumbo Speaker Cable 259/0.12mm OFC



Top quality speaker cable. Figure 8, 259/0.12mm strands each side. Clear - blue trace.

- 100m roll, PVC insulation

Sold by the metre or by the roll.

Specifications	WB1732
Conductor Diameter	1.92mm x 2
Conductor mm2	2.93mm² x 2
AWG	12/13 x 2
Stranding	(259 x 0.12mm OFC) x 2
Dimensions	4mm x 8mm

Cat.	Per Metre	1+ Roll	5+ Rolls
WB1732	$4.75	$379.00	$309.00

Flat Jumbo Speaker Cable 203/0.12mm OFC

Ideal for car stereo or home wiring under the carpet. Clear with white trace

- 100m roll, PVC insulation

Sold by the metre or by the roll.

Specifications	WB1740
Conductor Diameter	1.7mm x 2
Conductor mm2	2.3mm² x 2
AWG	13/14 x 2
Stranding	(203 x 0.12mm OFC) x 2
Dimensions	12.5mm x 8.5mm

Cat.	Per Metre	1+ Roll	5+ Rolls
WB1740	$4.50	$359.00	$299.00

Pro Audio Speaker Cable 41/0.16mm OFC

Super flexible speaker cable. Separate colour-coded 18AWG red and black conductors in a single outer sheath. Conductors: 41 x 0.16 OFC. Jacket OD: 6mm

- 100m roll, PVC insulation

Sold by the metre or by the roll.

Specifications	WB1754
Conductor Diameter	0.16mm x 2
Conductor mm2	0.824mm² x 2
AWG	18 x 2
Stranding	(41 x 0.16mm OFC) x 2
Dimensions	6mm

Cat.	Per Metre	1+ Roll	5+ Rolls
WB1754	$2.45	$199.00	$159.00

Core Pro Audio Speaker Cable 41/0.16mm OFC

Super flexible for stage & pro applications. Four core OFC colour coded conductors. Conductors: 41 x 0.16mm OFC. Jacket OD: 7.5mm

- 100m roll, PVC insulation

Sold by the metre or by the roll.

Specifications	WB1762
Conductor Diameter	0.16mm x 4
Conductor mm2	0.824mm² x 4
AWG	18 x 4
Stranding	(41 x 0.16mm OFC) x 4
Dimensions	7.5mm

Cat.	Per Metre	1+ Roll	5+ Rolls
WB1762	$4.95	$399.00	$329.00

SPEAKER CABLE - 30M ROLLS

Light Duty Figure 8 30m Roll

14/0.14mm Figure 8. Grey with black trace. AWG: 24 x 2.

WB1703

Heavy Duty Figure 8 30m Roll

24/0.20mm Figure 8. Clear with black trace. AWG: 18 x 2.

WB1709

Extra Heavy Duty Figure 8 30m Roll

79/0.2mm. Figure 8. Clear with white trace. AWG: 13 x 2.

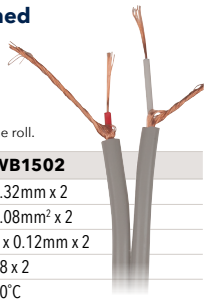
WB1713

Cat.	Qty 1+	Qty 4+	Qty 10+
WB1703	$14.95	$13.45	$11.95
WB1709	$35.95	$31.95	$27.95
WB1713	$89.95	$80.95	$71.95

SCREENED AUDIO & VIDEO CABLE

Figure 8 Twin Screened

Twin grey PVC covered individually screened conductors. Screens electrically separated.



Sold by the metre or by the roll.

Specifications	WB1502
Conductor Diameter	0.32mm x 2
Conductor mm2	0.08mm² x 2
Conductor Stranding	7 x 0.12mm x 2
AWG	28 x 2
Max. Temp	70°C
Screen Stranding	28 x 0.12mm x 2
Dimensions	3mm x 6mm
Roll Length	100m

Cat.	Per Metre	1+ Roll	5+ Rolls
WB1502	$1.00	$85.00	$65.00

Single Screened Audio

Grey PVC covered, light duty cable. Ideal for patch cords, small microphones, amplifier wiring, etc.

Sold by the metre or by the roll.

Specifications	WB1500
Conductor Diameter	0.32mm
Conductor mm2	0.08mm²
Conductor Stranding	7 x 0.12mm
AWG	28
Max. Temp	70°C
Screen Stranding	28 x 0.12mm
Dimensions	3mm
Roll Length	100m

Cat.	Per Metre	1+ Roll	5+ Rolls
WB1500	$0.65	$49.00	$39.00

2 Core Round

Twin screened pair (not balanced). Enclosed in a thick wall PVC jacket.

Sold by the metre or by the roll.

Specifications	WB1504
Conductor Diameter	0.32mm x 2
Conductor mm2	0.08mm² x 2
Conductor Stranding	7 x 0.12mm
AWG	28 x 2
Max. Temp	70°C
Screen Stranding	40 x 0.12mm
Dimensions	3.5mm
Roll Length	100m

Cat.	Per Metre	1+ Roll	5+ Rolls
WB1504	$0.98	$79.00	$65.00

4 Core Round

4 conductors each screened and encased in one PVC covering. Ideal for DIN plug and socket wiring. Screens electrically common to all conductors.

Sold by the metre or by the roll.

Specifications	WB1510
Conductor Diameter	0.32mm x 4
Conductor mm2	0.08mm² x 4
Conductor Stranding	7 x 0.12mm
AWG	28 x 4
Max. Temp	70°C
Screen Stranding	28 x 0.12mm
Dimensions	4.5mm
Roll Length	100m

Cat.	Per Metre	1+ Roll	5+ Rolls
WB1510	$1.75	$139.00	$119.00

PROFESSIONAL AUDIO & VIDEO

Triple cable, 2 for audio and the thicker one for video. It is the same cable that's used in our 3 RCA to 3 RCA pre-made cables.
2 Audio Cables.

- Roll Length 50m

"Fantastic quality for home theatre cabling."
- ADAM, RYDALMERE STORE MANAGER

Sold by the metre or by the roll.

Specifications	TWIN AUDIO CABLES	VIDEO CABLE
Inner Conduct	20 x 0.12mm OFC x 2	24 x 0.12mm OFC
Insulator	1.6mm FPE 1 Red/1 White	2.5mm FPE White
Screen	40 x 0.12mm OFC	4 x 16 x 0.12mm OFC
AWG	24x3	

Roll Length	Cat.	Per Metre	1+ Roll	5+ Rolls
50m	WB1554	$4.95	$199.00	$169.00

Professional S-Video

High Quality cable for video. S-Video uses 4 pin mini DIN plugs. This is the same cable as used in our S-Video video cables. Ideal for home cinema.

Sold by the metre or by the roll.

Specifications	WB1556
Conductor Diameter	0.32mm x 2
Conductor mm2	0.08mm² x 2
Conductor Stranding	7 x 0.12mm
AWG	22x2
Max. Temp	70°C
Screen Stranding	46 x 0.1mm
Dimensions	6 x 2 x 6.5mm
Roll Length	100m

Cat.	Per Metre	1+ Roll	5+ Rolls
WB1556	$3.95	$319.00	$259.00

Single Core OFC Screened

High quality mono audio cable. Braid: 96/0.10 + Alum, Capacitance: 6.8pF/m, Impedance: 65Ω. PEF insulation.

Sold by the metre or by the roll.

Specifications	WB1508
Conductor Diameter	0.32mm
Conductor mm2	0.08mm²
Conductor Stranding	2mm
AWG	22
Max. Temp	60°C
Screen Stranding	45 x 0.12mm
Dimensions	6mm
Roll Length	100m

Cat.	Per Metre	1+ Roll	5+ Rolls
WB1508	$2.95	$239.00	$199.00

Figure 8 OFC Screened Audio

High quality audio cable.
As used on our best leads.

Sold by the metre or by the roll.

Specifications	WB1506
Conductor Diameter	0.64mm x 2
Conductor mm2	0.32mm² x 2
Conductor Stranding	7 x 0.12mmx 2
AWG	28x2
Max. Temp	70°C
Screen Stranding	96 x 0.12mm plus Al Foil x 2
Dimensions	14 x 6mm
Roll Length	40m

Cat.	Per Metre	1+ Roll	5+ Rolls
WB1506	$4.95	$159.00	$129.00

PROFESSIONAL MICROPHONE CABLE

The best quality microphone cable for all P.A. and stage use. Flexible black matte finish PVC low noise cable with tinned copper screening.

2 Core Screened

High quality mic cable for PA, stage. Conductors 60 x 0.08mm x 2 core. PE insulation on conductors improved shielding. Cotton filled & tissue wrapped. Braided Shield: 144 x 0.1mm tinned copper (144/0.10). Outer Jacket 6.0mm diameter.

- Roll Length 100m
- AWG - 22-18

Sold by the metre or by the roll.

Cat.	Per Metre	1+ Roll	5+ Rolls
WB1530	$2.95	$239.00	$199.00

4 Core Screened

Conductors: 26 x 0.1mm x 4. PE insulation on conductors. Cotton filled & tissue wrapped.
Braided shield: 112 x 0.12mm.
Outer Jacket: 6mm diameter.

- Roll Length 100m
- AWG - 22

Sold by the metre or by the roll.

Cat.	Per Metre	1+ Roll	5+ Rolls
WB1540	$3.45	$279.00	$229.00

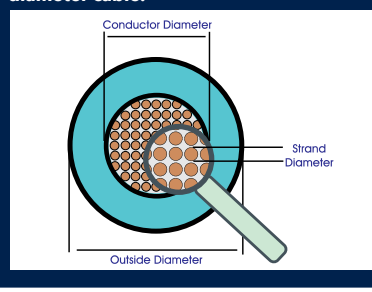
Tech talk

WIRE & CABLE

Conductors vs Strands

Diameter of wire and cable in this catalogue is expressed by the number of strands x strand diameter.

Eg. 13 x 0.12 reads as 13 strands of 0.12 diameter cable.



75 OHM COAXIAL TELEVISION CABLE & ROLLS

Belden Brand 75 Ohm Domestic TV Coax

This is RG59 with an OD of 6mm. Belden No. 9275.

- Inductance: .097uH/300mm
- Capacitance: 16.2pF/300mm
- Attenuation: 100MHz - 2.6db/30m, 300MHz - 4.45db/30m, 600MHz - 6.20db/30m

Cat. WB2002

75 Ohm RG59 Gas Injected Foam Coax

New generation TV Coax. Both a braid & foil, provides 100% screening.

- Won't get water logged underground
- Black in colour
- Outside diameter 6mm

Cat. WB2004

Sold by the metre or by the roll.

Roll Length	Cat.	Per Metre	1+ Roll	5+ Rolls
152m	WB2002	$1.15	$139.00	$105.00
100m	WB2004	$0.85	$69.00	$49.00

75 Ohm RG59 Gas injected Foam Coax 30m Roll

A 30m roll is generally a common length for a domestic TV antenna installation. Save over buying by the metre, and a small roll is easy to work with.

Black Cat. WB2005

White Cat. WB2001

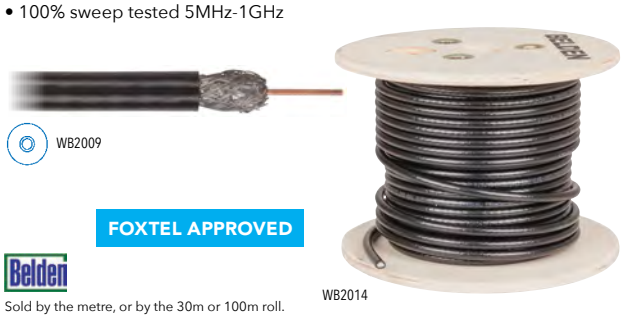
Sold by the roll.

Roll Length	Colour	Cat.	Qty 1+	Qty 4+	Qty 10+
30m	Black	WB2005	$22.95	$20.45	$17.95
30m	White	WB2001	$22.95	$20.45	$17.95

Belden Brand Quad Shield RG6 75 Ohm Coax

Used by Pay-TV installers. Quality Belden brand. We have repackaged in Australia on 100m reels. Normally it is only available in 1000 feet boxes. It features a solid 18AWG steel centre conductor, copper plated, gas injected polyethylene foam insulation (to keep water out), Black PVC jacket, plus 4 layers of screening: a combination of aluminium foils and braiding.

- 100% sweep tested 5MHz-1GHz



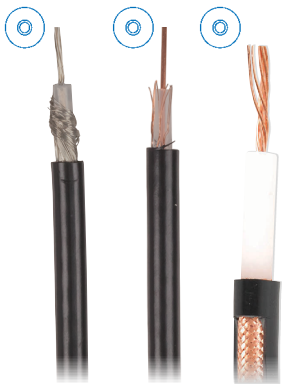
FOXTEL APPROVED

Sold by the metre, or by the 30m or 100m roll.

Specifications	BOTH
Centre Conductor	18AWG steel Cu plated 1.016 dia
Core O.D	4.572mm
Jacket O.D	7.569mm
Nom. Impedance	75Ω
Nom. Capacity	16.2pf/ft
Vel. of prop	82%, 53.1pf/m
AUSTAR Approval	F 30456
Foxtel Approval	F 30456
Belden Part	1189A

Roll Length	Cat.	Per Metre	1+ Roll	5+ Rolls
100m	WB2009	$1.95	$159.00	$119.00
Roll Length	**Cat.**	**Qty 1+**	**Qty 4+**	**Qty 10+**
30m Roll	WB2014	$49.95	$44.95	$39.95

COMMUNICATION COAX CABLE



50 Ohm RG58 C/U Networking

RF communication cable suitable for signals up to 500MHz. Ideal for CB, marine, amateur, and two-way radio.

- Stranded centre core
- Wire braid shielding

Cat. WB2012

50 Ohm RG58/U

RF communication cable suitable for signals up to 500MHz. Ideal for CB , marine, amateur, two-way radio and computer networking

- Solid centre core
- Wire braid shielding

Cat. WB2010

50 Ohm RG213/U

Communication cable commonly used in UHF.

- 100m Roll Length - sold by the metre or roll

Cat. WB2015

Sold by the metre or by the roll.

Conductors	AWG	OD	Cat.	Per Metre	1+ Roll	5+ Rolls
19/0.18 + 112/0.12mm	23	5mm	WB2012	$2.45	$209.00	$159.00
19/0.18 + 112/0.12mm	23	5mm	WB2010	$1.65	$139.00	$109.00
7/0.75 + 216/0.12mm	23	10.2mm	WB2015	$5.75	$489.00	$379.00

QUALITY COAX CABLE

We do not sell cheap 3C-2V type TV coax. It's screening is inadequate for acceptable performance in today's digital TV environment.

TELEPHONE CABLE

2 Pair (4 Wire)

Flat cable. Ivory colour, 4 x 7 x 0.12mm

- 100m Roll Length - sold by the metre or roll

Cat. WB1620

3 Pair (6 Wire)

Flat cable. Ivory colour, 6 x 7 x 0.12mm

- 100m Roll Length - sold by the metre or roll

Cat. WB1622

Sold by the metre or by the roll.

Conductors	AWG	OD	Cat.	Per Metre	1+ Roll	5+ Rolls
7/0.16mm	28	5mm	WB1620	$0.80	$69.00	$49.00
7/1.16mm	28	7mm	WB1622	$1.00	$85.00	$65.00

CAT5E / CAT6 CABLE

Cat5e Solid network

Single strand Cat5e, used for long runs in permanent installations.

- A-Tick approved, Blue in colour, 100MHz

POLYWRAPPED 30M PACK - NO ROLL

Cat. WB2023

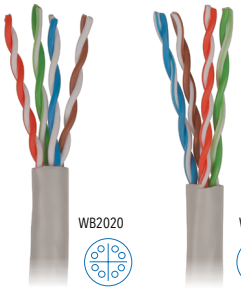
100M ROLL

Cat. WB2022

Sold by the metre, 30m pack or by the roll.

Roll Length	AWG	Cat.	Qty 1+	Qty 4+	Qty 10+
30m Pack	24	WB2023	$34.95	$30.95	$27.95
Roll Length	**AWG**	**Cat.**	**Per Metre**	**1+ Roll**	**5+ Rolls**
100m	24	WB2022	$1.20	$89.00	$79.00

CAT5E / CAT6 CABLE



Cat5e 8 Core Stranded Network

An ACMA approved high quality cable for patch leads and short runs. Consists of 4 twisted pairs, each conductor 7/0.20mm copper wire, polypropylene insulated with a tough ivory colour PVC jacket. 100MHz.
Cat. WB2020

Cat6 Solid Core UTP Network

Designed for reliable high-speed networks. Suitable for IDC terminations on patch panels and wall plates. 4 x 23 AWG solid core twisted pairs. PVC spline.
Cat. WB2030

ACMA Approved

Sold by the metre or by the roll.

Roll Length	AWG	Cat.	Per Metre	1+ Roll	5+ Rolls
100m	24	WB2020	$1.49	$119.00	$95.00
100m	23	WB2030	$1.45	$109.00	$95.00

COMPUTER / DATA CABLE

50 Ohm RG174U Coax Cable

Handy 20m length of unterminated RG174/U cable as commonly used in Wi-Fi and amateur radio installations. Tinned copper braid.

- Impedance: 50 ohm
- Insulation: Polyethylene (PE)
- AWG: 28

Sold by the 20m roll.

Roll Length		Cat.	Qty 1+	Qty 4+	Qty 10+
20m	RG174/U	WB2018	$29.95	$26.95	$23.95

Computer

All are screened to stop RFI.

- 6 way: 7/0.12 x 6C + foil + 7/0.16 OD 5mm
- 9 way: 7/0.12 x 9C + foil + 7/0.16 OD 5mm
- AWG: 28

Cat. WB1575 & Cat. WB1578

Sold by the metre or by the roll.

Sold by the metre or by the roll.

Roll Length		Cat.	Per Metre	1+ Roll	5+ Rolls
100m	6 Way	WB1575	$2.45	$209.00	$159.00
100m	9 Way	WB1578	$2.85	$249.00	$189.00

Tech talk

WHY OUR WIRE IS TINNED

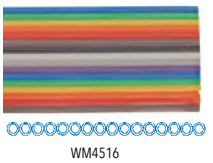
We now supply all multi-strand power cable with the copper conductors tinned. When you put a coating of pure tin over the copper, you prevent the copper from oxidising. This oxidising can prevent you from achieving a good, tinned solder connection to the wire. This is particularly important in marine and car installations. We have not increased our price to you for this step up in quality.

Are you in the trade?
For professionals engaged in electronics & construction-related industries.
trade card
jaycar

RIBBON CABLE

IDC Ribbon

Designed for Insulation Displacement Connectors.
Grey in colour with red trace.
Cat. WM4502, Cat. WM4504, Cat. WM4508



Rainbow Cable 16 Core

Colour coded strands of insulated conductor bonded together in a flat cable. Ideal for rewiring looms, can be split and each individual wire used.
Cat. WM4516

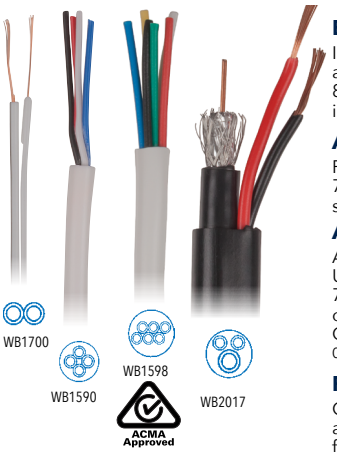
Sold by the metre or by the roll.

Specifications	IDC Ribbon	Rainbow
Pitch	1.27mm (0.05")	1.27mm (0.05")
Strands	7 x 0.127mm	7 x 0.127mm
AWG	28	28

Roll Length		Cat.	Per Metre	1+ Roll	5+ Rolls
30m	16 Way	WM4502	$2.75	$69.00	$59.00
30m	26 Way	WM4504	$3.75	$95.00	$85.00
30m	50 Way	WM4508	$7.95	$209.00	$179.00
30m	16 Way	WM4516	$5.95	$159.00	$139.00

p.A250 - IDC connectors

INTERCOM / ALARM / CCTV CABLE



Bell Wire

Ideal for doorbells, intercoms, or anywhere where a really thin figure 8 cable is required. 7 x 0.10mm x 2 in tough outer sheath. Cat. WB1700

Alarm - 4 Core

Flexible stranded conductors, 7 x 0.16mm x 4 in tough outer sheath. Cat. WB1590

Alarm - 6 Core

Austel approved alarm cable. Use with alarms that have diallers. 7 x 0.2mm x 6 flexible stranded conductors in tough outer sheath. OD: 5.1mm. Colour white.
Cat. WB1598 ACMA Approved

RG59 / Power Cable

Combines RG59 coaxial cable and 20AWG power cable. Ideal for CCTV and surveillance applications. OD: 7.5mm.
Cat. WB2017

Sold by the metre or by the roll.

Roll Length	AWG	Cat.	Per Metre	1+ Roll	5+ Rolls
100m	30	WB1700	$0.30	$24.00	$19.00
100m	25	WB1590	$0.95	$75.00	$59.00
100m	24	WB1598	$1.95	$159.00	$129.00
100m	20	WB2017	$1.95	$169.00	$129.00

Alarm Cable

7 x 0.16mm, 4 core.
Cat. WB1591

Alarm Cable - A-Tick Approved

Austel approved. For use in alarms with diallers. 6 x 7/0.2 flexible stranded conductors in tough outer sheath. Cat. WB1596 ACMA Approved

Sold by the 30m roll.

Roll Length	AWG	Cat.	Qty 1+	Qty 4+	Qty 10+
30m	25	WB1591	$24.95	$22.45	$19.95
30m	24	WB1596	$49.95	$44.95	$39.95

RCA PLUGS & SOCKETS:

RCA derives from the name Radio Corporation of America. It is sometimes called a Phono connector or Cinch connector. The connector is commonly used for audio and video signals (composite or component).

Plugs - Plastic

Economy style.

PP0240

Jacket Colour	Cat.	Qty 1+	Qty 10+	Qty 50+
Blue	PP0238	$0.85	$0.76	$0.68
Green	PP0239	$0.85	$0.76	$0.68
Red	PP0240	$0.85	$0.76	$0.68
Black	PP0242	$0.85	$0.76	$0.68
Yellow	PP0243	$0.85	$0.76	$0.68
White	PP0244	$0.85	$0.76	$0.68

Nickel Plated Metal RCA Plugs with Cable Relief Spring

Cat.	Qty 1+	Qty 10+	Qty 50+
PP0245	$2.25	$2.00	$1.80

Gold Plated Metal RCA Plugs with Cable Relief Spring

- Up to 7mm cable

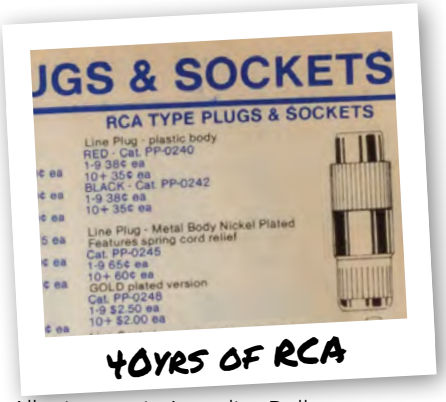
PP0236

Jacket Colour	Cat.	Qty 1+	Qty 10+	Qty 50+
Red	PP0236	$3.25	$2.90	$2.60
Black	PP0237	$3.25	$2.90	$2.60

Premium Gold Plated Metal Body RCA Plugs

PP0230

Jacket Colour	Cat.	Qty 1+	Qty 10+	Qty 50+
Red	PP0230	$3.95	$3.45	$3.15
Black	PP0232	$3.95	$3.45	$3.15
Yellow	PP0231	$3.95	$3.45	$3.15
White	PP0233	$3.95	$3.45	$3.15
Blue	PP0234	$3.95	$3.45	$3.15
Green	PP0235	$3.95	$3.45	$3.15



Sockets - Plastic

Economy style.

PS0250

Jacket Colour	Cat.	Qty 1+	Qty 10+	Qty 50+
Red	PS0250	$0.95	$0.85	$0.76
Black	PS0252	$0.95	$0.85	$0.76

Metal Body RCA Sockets

With cable protection spring.

Cat.	Qty 1+	Qty 10+	Qty 50+
PS0254	$2.25	$2.00	$1.80

Gold Plated Metal RCA Socket with Cable Relief Spring

With cable protection spring.

PS0272

Jacket Colour	Cat.	Qty 1+	Qty 10+	Qty 50+
Red	PS0272	$2.45	$2.15	$1.95
Black	PS0274	$2.45	$2.15	$1.95

RCA Plug & Socket with Screw Terminals

RCA connector to screw terminal block.
No specialist tools required.

PA3717

PA3718

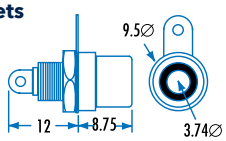
Type	Cat.	Qty 1+	Qty 4+	Qty 10+
Plug	PA3717	$4.95	$4.45	$4.00
Socket	PA3718	$4.95	$4.45	$4.00

RCA LEADS

In addition to the products above, we also have a large range of interconnection leads with RCA plugs or sockets on one end and RCAs - or many other types on the other.

RCA Chassis Sockets Nickel Plated

Non Insulated.
Nickel plated.

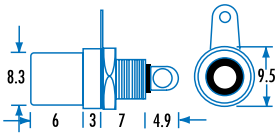


PS0257

Colour	Cat.	Qty 1+	Qty 10+	Qty 50+
Black	PS0256	$0.95	$0.85	$0.75
Red	PS0257	$0.95	$0.85	$0.75
Yellow	PS0255	$0.95	$0.85	$0.75

RCA Chassis Sockets - Gold

Non Insulated.



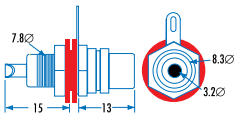
PS0259

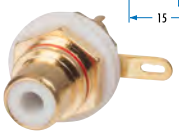
Colour	Cat.	Qty 1+	Qty 10+	Qty 50+
Black	PS0258	$2.15	$1.90	$1.70
Red	PS0259	$2.15	$1.90	$1.70
Yellow	PS0260	$2.15	$1.90	$1.70
White	PS0261	$2.15	$1.90	$1.70
Blue	PS0270	$2.15	$1.90	$1.70
Green	PS0271	$2.15	$1.90	$1.70

RCA Chassis Sockets - Gold

Requires 9.5mm dia panel hole.

- **INSULATED FROM CHASSIS**



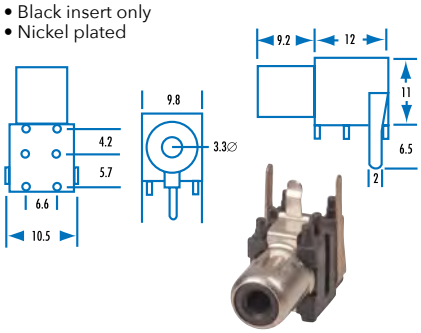


PS0276

Colour	Cat.	Qty 1+	Qty 10+	Qty 50+
Red	PS0276	$3.95	$3.45	$3.15
Black	PS0277	$3.95	$3.45	$3.15
Yellow	PS0275	$3.95	$3.45	$3.15
White	PS0278	$3.95	$3.45	$3.15

RCA Right Angle Socket

- Black insert only
- Nickel plated



Cat.	Qty 1+	Qty 10+	Qty 50+
PS0279	$1.75	$1.55	$1.40

All prices are in Australian Dollars

For next day delivery, or Click and Collect, see page A4

RCA CONNECTORS

RCA ADAPTORS

RCA Socket Adaptors

Type	Cat.	Qty 1+	Qty 4+	Qty 10+
RCA Female to RCA Female	PA3598	$2.95	$2.60	$2.30
RCA Plug to 2 x RCA Socket	PA3560	$3.95	$3.45	$3.15
1 x RCA Socket to 2 x RCA Socket	PA3562	$3.95	$3.45	$3.15
RCA Socket to RCA Socket	PA3599	$5.95	$5.25	$4.75
3 x RCA to 3 x RCA Socket	PA3564	$7.95	$6.95	$6.25
RCA Socket to BNC Socket	PA3678	$3.95	$3.45	$3.15
Double Adaptor - Gold Plated	PA3570	$5.95	$5.25	$4.75

Panel Mount - RCA Socket to Socket

Gold plated, insulated panel mounted RCA socket to RCA socket adaptors. Allows you to plug straight into the back of the socket.

*** INSULATED FROM MOUNTING PANEL**

Type	Cat.	Qty 1+	Qty 4+	Qty 10+
Yellow*	PS0441	$4.95	$4.45	$3.95
Red*	PS0442	$4.95	$4.45	$3.95
Black*	PS0443	$4.95	$4.45	$3.95
White*	PS0446	$4.95	$4.45	$3.95

Product Data:

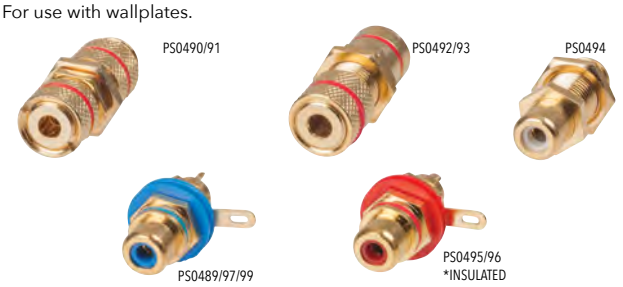
We have so much data and fact sheets, we cannot fit it all in our catalogue. Check out our website for over 4,000 pages of data!

RCA Plug to Adaptors

Type	Cat.	Qty 1+	Qty 4+	Qty 10+
RCA Plug to 3.5mm Mono Socket	PA3508	$2.25	$2.00	$1.80
RCA Male to RCA Male Socket	PA3597	$2.95	$2.60	$2.30
RCA Plug to 6.5mm Mono Socket	PA3510	$2.25	$2.00	$1.80
RCA Plug to PAL TV Socket	PA3676	$3.95	$3.45	$3.15
RCA Male to T-81 Socket	PA3677	$3.95	$3.55	$3.15
RCA Plug to BNC Female Socket	PA3655	$3.95	$3.45	$3.15
RCA Right Angle Adaptor	PA3566	$5.95	$5.35	$4.75

GOLD PLATED CONNECTORS

For use with wallplates.

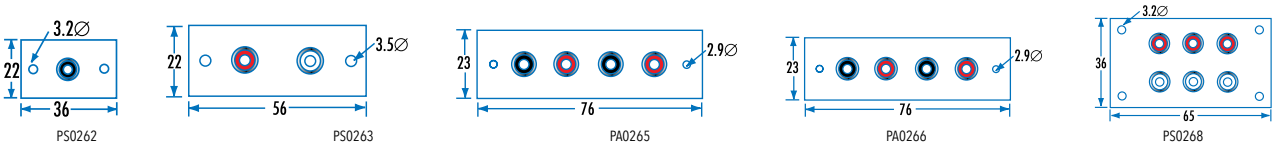


Type	Cat.	Qty 1+	Qty 2+	Qty 5+
Binding Post with Banana - Red	PS0490	$4.25	$3.80	$3.40
Binding Post with Banana - Black	PS0491	$4.25	$3.80	$3.40
Banana Socket Binding Post - Red	PS0492	$2.95	$2.60	$2.30
Banana Socket Binding Post - Black	PS0493	$2.95	$2.60	$2.30
RCA Socket to F-61 Socket	PS0494	$2.45	$2.15	$1.95
RCA Socket - Solder - Blue	PS0489	$2.45	$2.15	$1.95
RCA Socket - Solder - Red*	PS0495	$2.45	$2.15	$1.95
RCA Socket - Solder - Black*	PS0496	$2.45	$2.15	$1.95
RCA Socket - Solder - Yellow	PS0497	$2.45	$2.15	$1.95
RCA Socket - Solder - Green	PS0499	$2.45	$2.15	$1.95

RCA PHENOLIC SOCKETS

RCA Phenolic Sockets

RCA sockets securely riveted to an insulated phenolic panel. Each socket is electrically isolated from the other.



Type	Cat.	Qty 1+	Qty 10+	Qty 50+
1 Way	PS0262	$1.55	$1.35	$1.20
2 Way	PS0263	$2.25	$2.00	$1.80
4 Way	PA0265	$3.50	$3.15	$2.80
4 Way Gold Plated	PA0266	$4.95	$4.45	$3.95
6 Way	PS0268	$4.50	$4.05	$3.60

RCA, 2.5MM & 3.5MM CONNECTORS

2.5MM JACK PLUGS, SOCKETS & ADAPTORS

Also known as a phone plug (US) or TRS (tip, ring, sleeve).
Available as mono or stereo versions in several common diameters: 2.5mm - the smallest size used where space is a premium. Was once used as a mono earphone plug but now has multichannel functions.

2.5mm Subminiature Plugs

• Nickel plated

PP0100 PP0103 PP0104 PP0101

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Mono	PP0100	$0.95	$0.85	$0.76
Stereo	PP0103	$1.45	$1.30	$1.15
Stereo Right Angled	PP0104	$3.95	$3.45	$3.15
4 Contact	PP0101	$3.95	$3.55	$3.15

2.5mm Stereo Line Plug - IP67

• Nickel plated

LTW®

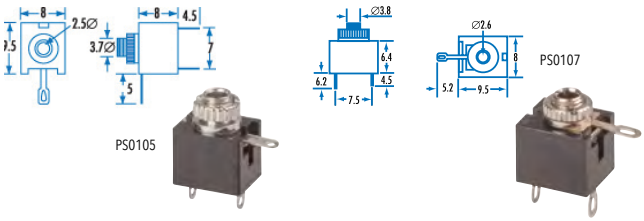
Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Stereo Line Plug with 1m Cable	PP0787	$12.95	$11.35	$10.35

2.5mm Line Socket

• Nickel plated

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Stereo	PS0109	$2.25	$2.00	$1.80

2.5mm Chassis Sockets



Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Mono	PS0105	$1.25	$1.10	$1.00
Stereo	PS0107	$1.85	$1.65	$1.45

2.5mm Surface Mount Sockets

• Packet of 10

SMD

Type	Cat.	Qty 1+	Qty 10+	Qty 25+
SMD Stereo Switched	PS0110	$19.95	$17.55	$11.95

2.5mm Adaptors

• Nickel plated

PA3502 PA3504 PA3532

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
2.5mm Stereo Plug to 3.5mm Stereo Right Angle Socket	PA3502	$4.25	$3.80	$3.40
2.5mm Mono Plug to 6.5mm Mono Socket	PA3504	$2.25	$2.00	$1.80
2.5mm Stereo Plug to 3.5mm Stereo Socket	PA3532	$4.25	$3.80	$3.40

3.5MM JACK PLUGS, SOCKETS & ADAPTORS

Also known as a phone plug (US) or TRS (tip, ring, sleeve). Available as mono or stereo versions in several common diameters: 3.5mm - the mini plug, which in the stereo version is widely found on headphones used with portable audio such as MP3 players etc. It is also a standard connector used on PC sound cards. The mono version is occasionally used as a DC power connector.

3.5mm Miniature Plugs

• Nickel plated (PP0114/130/136)
• Gold plated (PP0138)

PP0114 PP0130 PP0136 PP0138

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Mono	PP0114	$0.95	$0.85	$0.76
Stereo	PP0130	$1.45	$1.30	$1.15
Stereo Right Angled	PP0136	$2.15	$1.90	$1.70
4 Contact Gold Plated	PP0138	$4.95	$4.45	$3.90

3.5mm Metal Plugs with Cable Protection Spring

• Nickel plated

PP0116 PP0135 PP0131

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Mono	PP0116	$1.75	$1.55	$1.40
Stereo	PP0135	$2.25	$2.00	$1.80
Stereo Gold Plated	PP0131	$2.95	$2.65	$2.35

3.5mm Slimline - Gold Plugs

• Gold plated over brass

PP0132 PP0134

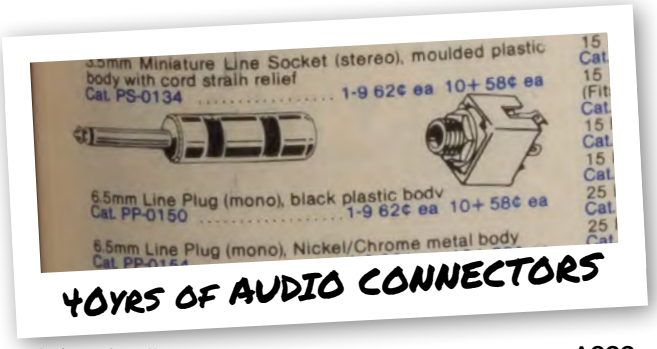
Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Stereo	PP0132	$3.95	$3.45	$3.15
4 Pole	PP0134	$5.95	$5.35	$4.75

3.5mm Line Sockets

• Nickel plated

PS0126 PS0134 PS0139

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Mono	PS0126	$1.75	$1.55	$1.40
Stereo	PS0134	$2.25	$2.00	$1.80
4 Contact	PS0139	$4.95	$4.45	$3.90



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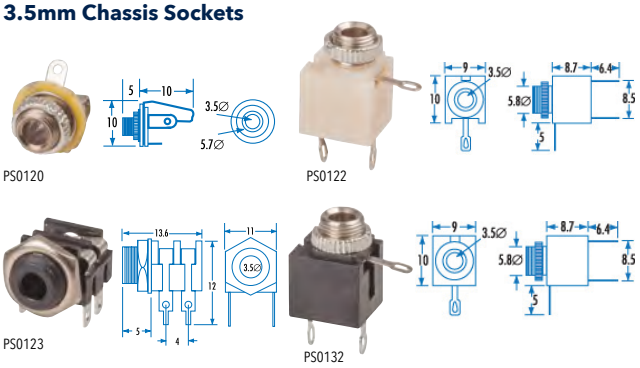
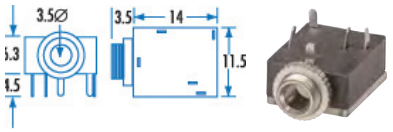
3.5MM JACK PLUGS, SOCKETS & ADAPTORS CONTINUED

3.5mm Chassis Sockets



Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Mono Open	PS0120	$1.75	$1.55	$1.40
Mono Enclosed	PS0122	$1.25	$1.10	$1.00
Mono Insulated	PS0123	$2.45	$2.15	$1.95
Stereo	PS0132	$1.65	$1.45	$1.30

3.5mm PCB Socket



Type	Cat.	Qty 1+	Qty 10+	Qty 50+
PCB Stereo Switched	PS0133	$1.95	$1.75	$1.55

3.5mm Adaptors - Stereo

• Nickel plated

Stereo 3.5mm	Cat.	Qty 1+	Qty 4+	Qty 10+
Plug to 6.5mm Stereo Socket	PA3586	$2.95	$2.60	$2.30
Plug to 3.5mm Stereo R/A Socket	PA3503	$4.25	$3.80	$3.40
Plug to 2.5mm Stereo Socket	PA3536	$3.95	$3.45	$3.15
Plug to 2 x 3.5mm Stereo Sockets	PA3582	$3.95	$3.45	$3.15
Plug to 2 x RCA Sockets	PA3580	$3.95	$3.45	$3.15
Socket to 2 x 3.5mm Mono Plug	PA3581	$4.95	$4.45	$4.00

3.5mm Stereo Socket to 3.5mm Stereo Socket

• Nickel plated

Type	Cat.	Qty 1+	Qty 4+	Qty 10+
Stereo to Stereo Socket	PA3583	$2.25	$2.00	$1.80

3.5mm Stereo Socket to 2 x RCA Sockets Adaptor

Type	Cat.	Qty 1+	Qty 4+	Qty 10+
Stereo to ZxRCA Sockets	PA3585	$2.95	$2.65	$2.35

3.5mm Adaptors - Mono

• Nickel plated

Type	Cat.	Qty 1+	Qty 4+	Qty 10+
Plug to RCA Socket	PA3500	$2.25	$2.00	$1.80
Plug to 6.5mm Mono Socket	PA3506	$2.25	$2.00	$1.80
Plug to 3.5mm Stereo Socket	PA3584	$2.25	$2.00	$1.80
Plug to 6.5mm Stereo Socket	PA3594	$2.25	$2.00	$1.80
Plug to PAL (75 ohm) Socket	PA3657	$3.95	$3.45	$3.15

6.5MM JACK PLUGS, SOCKETS & ADAPTORS

Also known as a phone plug (US) or TRS (tip, ring, sleeve). Available as mono or stereo versions in several common diameters: 6.5mm - the largest size; the mono version is used on guitar & microphone leads, while the stereo version is often used on Hi-Fi headphones. The 6.5mm (or 1/4" phone plug) was originally used for manual telephone switchboards particularly the 'Sylvester' type.

6.5mm 1/4" Plugs Plugs - Line - Mono

• Nickel plated

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Mono - Plastic	PP0150	$1.55	$1.35	$1.20
Mono - Metal	PP0154	$2.15	$1.90	$1.70
Mono - Gold	PP0156	$3.95	$3.45	$3.15
Mono - Red	PP0151	$4.95	$4.45	$3.90
Mono - Black	PP0152	$4.95	$4.45	$3.90

6.5mm 1/4" Plugs Plugs - Line - Stereo

• Nickel plated

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Stereo - Plastic	PP0170	$2.35	$2.10	$1.85
Stereo - Metal	PP0174	$2.95	$2.65	$2.35
Stereo - Gold	PP0175	$5.25	$4.60	$4.15
Stereo - Red	PP0177	$4.95	$4.45	$3.90
Stereo - Black	PP0178	$4.95	$4.45	$3.90

6.5mm Pro Metal Plugs

Made especially for the rigours of the road or anywhere where a heavy duty, tough 6.5mm plug is called upon. The mono plugs feature blue identification rings, whereas the stereo plugs have black rings. This is particularly handy if you have a combination of stereo and mono plugs on the one mixing desk or patch bay.

• Nickel plated over brass

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Mono Metal - Pro	PP0157	$5.95	$5.35	$4.75
Stereo Metal - Pro	PP0179	$6.95	$6.25	$5.55

6.5MM JACK SOCKETS & ADAPTORS

6.5mm 1/4" Line Sockets

PS0166 PS0194

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Mono	PS0166	$1.95	$1.75	$1.55
Stereo	PS0194	$2.25	$2.00	$1.80

6.5mm 1/4" Flush Panel Socket

Ever tried to mount a 6.5mm socket in a wooden box? It was impossible! Now it's easy with our unique plastic mounting aid.

Type	Cat.	Qty 1+	Qty 5+	Qty 10+
Socket Mounting Cup	HS8025	$2.50	$2.20	$1.95

6.5mm Adaptors

- Nickel plated

PA3588 PA3592 PA3534 PA3590 PA3530 PA3591

Type	Cat.	Qty 1+	Qty 4+	Qty 10+
Mono Socket to 6.5mm Mono Plug	PA3588	$2.25	$2.00	$1.80
Mono Plug to RCA Socket	PA3592	$2.25	$2.00	$1.80
Mono Plug to 2 x 6.5mm Mono Socket	PA3534	$3.95	$3.45	$3.15
Stereo Plug to 3.5mm Stereo Socket	PA3590	$2.25	$2.00	$1.80
Stereo Plug to 2 x 6.5mm Stereo Socket	PA3530	$3.95	$3.45	$3.15
Stereo Socket to 6.5mm Stereo Socket	PA3591	$4.25	$3.80	$3.40

6.5mm Right Angle Plugs

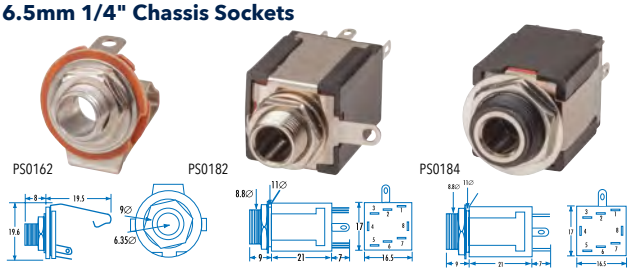
Super tough metal construction plug for harsh environments & musos who want the best.

- Use with 6mm O.D. cable
- Strain relief provided
- Nickel plated

PP0158 PP0176 PP0159

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Right Angle	PP0158	$1.95	$1.75	$1.55
Stereo Right Angle	PP0176	$2.50	$2.21	$1.95
Pro Right Angle	PP0159	$4.95	$4.45	$3.90

6.5mm 1/4" Chassis Sockets

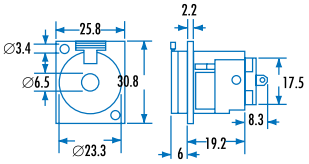


PS0162 PS0182 PS0184

Professional Locking Chassis Jack

Metal shell, mates with all mono and stereo 6.5mm (1/4") phono plugs. Plug locking feature keeps plug in the socket.

PS0196



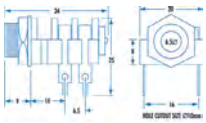
NEUTRIK

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Mono Open Unswitched	PS0162	$1.95	$1.75	$1.55
Mono & Stereo	PS0196	$19.95	$17.95	$15.95
Stereo Switched DPDT	PS0182	$3.75	$3.35	$3.00
Stereo Insulated Switched Insulated	PS0184	$3.45	$3.05	$2.75

6.5mm PCB / Chassis Sockets

Mono Insulated

- ABS Body



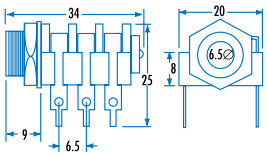
Closed when plug is NOT inserted

PS0160

Insulated DPST Switched - Stereo

Works OK in mono.

- ABS Body



PS0190

Insulated Unswitched - Stereo

Works OK in mono.

- ABS Body

PS0192

High Quality - Stereo

- Switching DPST
- Black plastic front insert
- Glossy chrome-finish nut
- Stereo, but can be used for mono
- Minimum Life: 10,000 insert/ withdraw cycles
- Contact Rating: 2.5A at 48VD
- ABS Body

PS0195

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Mono Insulated Switched	PS0160	$2.45	$2.15	$1.95
Stereo Insulated DPST Switched	PS0190	$3.50	$3.15	$2.80
Stereo Insulated Unswitched	PS0192	$2.95	$2.65	$2.35
Stereo	PS0195	$4.95	$4.45	$3.95

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BANANA CONNECTORS

BANANA PLUGS

Banana plugs & sockets originally started life on test equipment. Their versatility quickly saw them as output connectors for power supplies. When they were integrated with binding posts they quickly saw use as speaker connectors. Now they are everywhere.

Banana Plugs

Plugs - Piggy Back

With this quality piggy back style, another banana plug can be inserted into the back of the plug.

PP0390

Colour	Cat.	Qty 1+	Qty 10+	Qty 50+
Red	PP0390	$2.25	$2.00	$1.80
Black	PP0391	$2.25	$2.00	$1.80
Green	PP0381	$2.25	$2.00	$1.80
Blue	PP0382	$2.25	$2.00	$1.80
Yellow	PP0383	$2.25	$2.00	$1.80

Piggy Back Insulating Shroud Type

Works with our PS0420-24 series.

PP0385

Colour	Cat.	Qty 1+	Qty 10+	Qty 50+
Red	PP0385	$2.95	$2.65	$2.35
Black	PP0386	$2.95	$2.65	$2.35
Green	PP0387	$2.95	$2.65	$2.35
Blue	PP0388	$2.95	$2.65	$2.35
Yellow	PP0389	$2.95	$2.65	$2.35

Plugs

PP0400

PP0394

Colour	Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Red	4mm	PP0400	$1.15	$1.00	$0.90
Black	4mm	PP0402	$1.15	$1.00	$0.90
Red	Right Angle	PP0394	$2.50	$2.25	$2.00
Black	Right Angle	PP0395	$2.50	$2.25	$2.00

Plugs - Metal Gold Plated

Designed for monster type speaker cable.

- Side entry hole, with finger screw locking action
- Hole will accept another banana plug or thick cable

Plugs - Metal Gold Plated & Locking

These lock into the socket, and cannot be easily removed

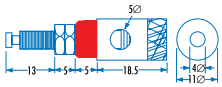
- Gold plated

PP0426
PP0417

Colour	Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Red		PP0426	$4.95	$4.45	$3.90
Black		PP0427	$4.95	$4.45	$3.90
Red	Locking	PP0416	$7.95	$6.95	$6.25
Black	Locking	PP0417	$7.95	$6.95	$6.25

Speaker Box Mount

These have a hole entry on the side which will accept monster type speaker cable or a banana plug. Thread is 19mm long.



PP0434

Colour	Cat.	Qty 1+	Qty 10+	Qty 50+
Red	PP0434	$4.95	$4.45	$3.90
Black	PP0435	$4.95	$4.45	$3.90

Find Out More In Store
Our staff offer friendly and helpful service. We're here to help.

BANANA SOCKETS

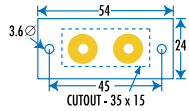
4mm Banana Socket to Alligator Clip

	Cat.	Qty 1+	Qty 10+	Qty 50+
Red	PA3668	$3.95	$3.55	$3.15
Black	PA3669	$3.95	$3.55	$3.15

Banana / Screw Type

2 Way Gold Terminals. Top quality speaker terminal with gold banana sockets which also have a huge hole (6mm) to accept Monster type speaker cable.

- Supplied with gasket
- Dimensions: 54(W) x 24(H)mm



Type	Cat.	Qty 1+	Qty 5+	Qty 10+
Screw	PT3008	$10.95	$9.45	$8.45

Banana Socket / Binding Post Wallplates

- Standard power point size
- Gold plated

PT0470

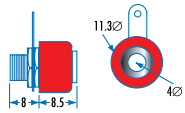
PT0472

PT0474

Type	Cat.	Qty 1+	Qty 2+	Qty 5+
2 Way	PT0470	$12.95	$11.45	$9.95
4 Way	PT0472	$19.95	$17.95	$15.95
8 Way	PT0474	$27.95	$24.95	$21.95

Banana Chassis Sockets

PS0406



Colour	Cat.	Qty 1+	Qty 10+	Qty 50+
Red	PS0406	$0.85	$0.76	$0.68
Black	PS0408	$0.85	$0.76	$0.68

Fully Insulated

Works with our PP0385-89 series.

Fully Insulated	Cat.	Qty 1+	Qty 10+	Qty 50+
Red	PS0420	$2.75	$2.45	$2.20
Black	PS0421	$2.75	$2.45	$2.20
Green	PS0422	$2.75	$2.45	$2.20
Blue	PS0423	$2.75	$2.45	$2.20
Yellow	PS0424	$2.75	$2.45	$2.20

Heavy Duty Enclosed

Includes a plastic cover to reduce the risk of shorting. Grub screws for internal wire connection. Hole size is 12mm. Cable hole 5mm dia. Available in red or black.

- Gold plated

PP0436
PP0437

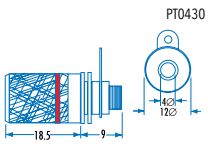
Fully Insulated Gold	Cat.	Qty 1+	Qty 10+	Qty 50+
Red	PP0436	$8.95	$8.05	$7.15
Black	PP0437	$8.95	$8.05	$7.15

BANANA & PUSH/SCREW TERMINALS

BANANA BINDING POSTS

Banana Sockets / Binding Posts - Metal

Will accept a banana plug in the end and monster type cable or banana plug in the side. Designed for mounting on the back of amplifiers as mounting thread is only 6mm long.



PT0430

PT0431

Amplifier Mount	Cat.	Qty 1+	Qty 10+	Qty 50+
Red	PT0430	$4.95	$4.45	$3.90
Black	PT0431	$4.95	$4.45	$3.90

Dual

- Insulated cable entry
- Post spacing 19mm

PT0457

50 Amp Jumbo

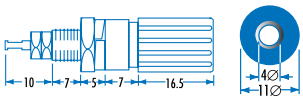
- 12mm hole size
- Overall dimensions: 58(D) x 20(Dia.)mm

PT0465

Binding Posts Standard

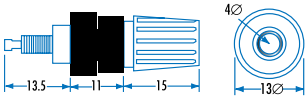
Incorporates a banana socket.

PT0450



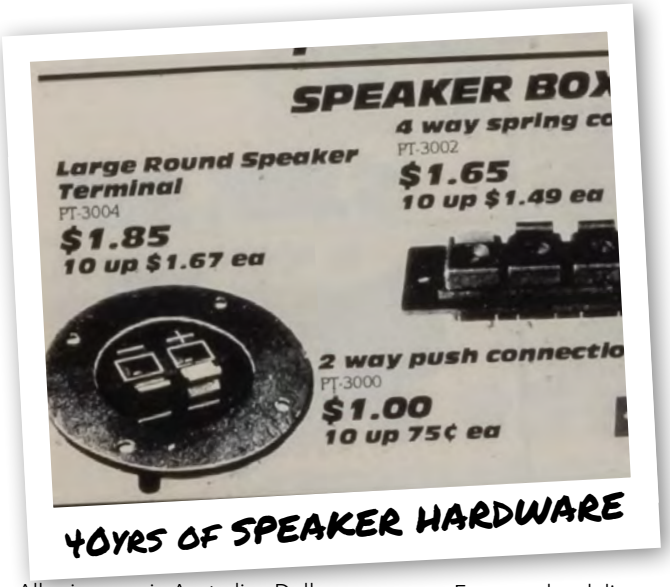
Premium

Super quality with metal thread.



PT0460

Colour	Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Blue	Standard	PT0450	$1.95	$1.75	$1.55
Yellow	Standard	PT0451	$1.95	$1.75	$1.55
White	Standard	PT0452	$1.95	$1.75	$1.55
Red	Standard	PT0453	$1.95	$1.75	$1.55
Black	Standard	PT0454	$1.95	$1.75	$1.55
Green	Standard	PT0455	$1.95	$1.75	$1.55
Red	Premium	PT0460	$2.95	$2.65	$2.35
Black	Premium	PT0461	$2.95	$2.65	$2.35
Green	Premium	PT0462	$2.95	$2.65	$2.35
Red/Black	Dual	PT0457	$6.95	$6.25	$5.50
Red	50A Jumbo	PT0465	$6.95	$6.25	$5.55
Black	50A Jumbo	PT0466	$6.95	$6.25	$5.55

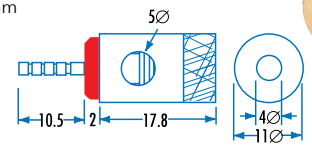


SPEAKER PUSH / SCREW TERMINALS

Jumbo Speaker Cable Terminals

Can't fit your large speaker cable into your speaker box spring terminals? Problem solved!! Simply terminate the thick cable into these gold connectors and the 1.5mm dia. pin easily fits into speaker rear terminals.

- Cable entry is 6mm
- Gold plated



PT3020

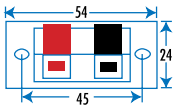
Type	Cat.	Qty 1+	Qty 5+	Qty 10+
PT3020	PT3020	$3.25	$2.90	$2.60
PT3021	PT3021	$3.25	$2.90	$2.60

2 Way - Up to 16AWG

Up to 16AWG cable.

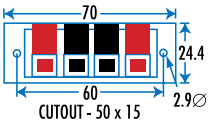
- Mounting holes: 45mm apart
- Dimensions: 54(L) x 24(W)mm

PT3000



PT3000

4 Way - Up to 16AWG



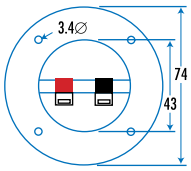
PT3002

2 Way Large Round Speaker Terminal

Up to 16 AWG cable.

- Cutout 50mm

PT3004



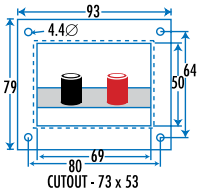
PT3004

2 Way Speaker Box Terminal

Ideal if you are running large size speaker cable to your speakers.

- Dimensions 92(W)x79(H)mm

PT3006



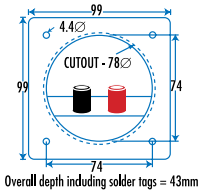
PT3006

2 Way Gold Terminals on a Plate

Top quality speaker terminal.

- Plate size 99 x 99mm
- Hole cutout is round - diameter 78mm

PT3012



PT3012

Type	Cat.	Qty 1+	Qty 5+	Qty 10+
2 Way	PT3000	$1.95	$1.75	$1.55
4 Way	PT3002	$3.25	$2.90	$2.60
2 Way Round	PT3004	$3.25	$2.90	$2.60
2 Way Speaker Box	PT3006	$7.50	$6.75	$6.00
2 Way Gold / Plate	PT3012	$12.95	$11.45	$9.95

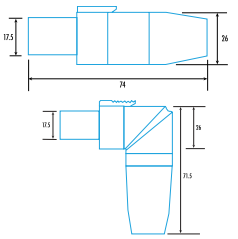
For next day delivery, or Click and Collect, see page A4

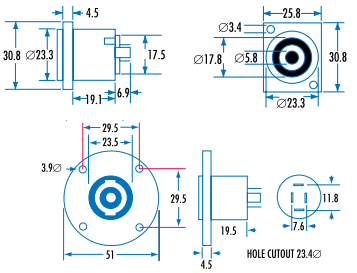
MULTI-PIN AUDIO CONNECTORS

"SPEAKON" LOUDSPEAKER PLUGS & SOCKETS

NEUTRIK Heavy duty, fail-safe speaker connectors

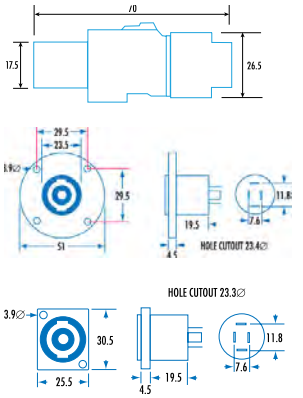
- 4 pole with Locking ring
- Solderless termination
- PS1094 & PS1092 hole cutout 24mm
- 30 amp continuous current
- The standard in high power PA speaker connections





Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Inline Speaker Connector 4 Pole	PP1090	$16.95	$14.95	$13.45
Inline Speaker Plug	PP1091	$21.95	$19.45	$17.45
Round Speaker Bin Chassis Mount Plastic	PS1094	$12.95	$11.45	$9.95
Square Chassis Mount Plastic	PS1092	$12.95	$11.45	$9.95

AUDIO - ECONOMY RANGE PLUGS, SOCKETS & LEADS



SOANAR

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Inline Speaker 4 Pole Connector	PP1080	$12.95	$11.45	$9.95
Round Speaker	PS1084	$9.95	$8.95	$7.95
Square Speaker Chassis Socket	PS1082	$9.95	$8.95	$7.95

Speakon Lead Extender

Connects Speakon leads together to extend cable runs as far as you need to.

- ABS construction

Cat.	Qty 1+	Qty 4+	Qty 10+
PA3689	$12.95	$11.35	$10.35

RELATED PRODUCT:

SPEAKON AUDIO LEADS

Excellent ready-made cable assemblies for your PA and sound reinforcement applications.

5m WA7100 P. B165
10m WA7102 P. B165

XLR - AMPHENOL® PLUGS & SOCKETS

Typically used for balanced connections such as professional microphones; these connectors are 3 pin & lock on to the socket. The confusion over whether pin 2 or 3 is hot has only relatively recently been resolved. The Standard has been defined by the Audio Engineering Society which we have outlined on the bottom of the this page.Amphenol® have taken over the genuine Cannon brand.

Line - 3 Pin

- Solder type
- Diecast metal shell

Amphenol

Line - 4 Pin

Cannon/Amphenol® Silver

- Diecast metal shell
- Nickel plated

Amphenol

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
3 Pin - Male	PP1052	$8.95	$8.05	$7.15
3 Pin - Female	PS1062	$10.95	$9.45	$8.45
4 Pin - Male	PP1040	$13.95	$12.45	$10.95
4 Pin - Female	PS1042	$17.95	$15.95	$13.95

Amphenol® LTW Inline Screw-in Cable Joiner 3P 6.6-8.5mm IP68

Amphenol

Newly developed Cable Joiner from Amphenol LTW, UL FICX series which is compliant with UL2238 standard. The UL FICX is designed with screw terminal termination, providing quick and practical field assembly. It is IP68 rated and equipped with UV resistant materials, that can meet the needs in LED lighting, CCTV security, Solar and Marine applications. Great for environments where reliable interconnections are required. Easy grip design.

Cat.	Qty 1+	Qty 10+	Qty 50+
PT4660	$16.95	$14.95	$13.45

Chassis Mount D-Series XLR Sockets

High quality Amphenol® brand XLR 3 pole chassis mount sockets. Can be front or rear mounted in P or D series panels.

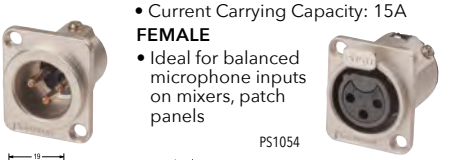
- 24mm hole cut-out
- D series flange
- Stamped phosphor
- Bronze contacts
- Nickel finish
- Max Wire Gauge: 14AWG
- Flammability Rating: UL94-V0
- Current Carrying Capacity: 15A

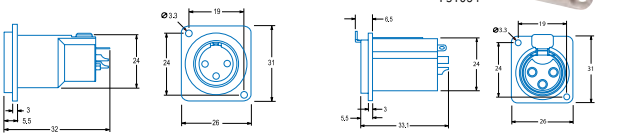
MALE

- Ideal for patch panels, studio, etc

FEMALE

- Ideal for balanced microphone inputs on mixers, patch panels



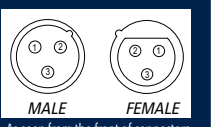


Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Male	PP1058	$8.95	$8.05	$7.15
Female	PS1054	$10.95	$9.45	$8.45

Tech talk

XLR WIRING

The Standard is defined by the Audio Engineering Society in AES14-1992(r1998)
Pin 1: Shield/Ground
Pin 2: Hot/in Phase / +
Pin 3: Cold / Out of Phase / -
To create an unbalanced connection, pin 1 & pin 3 are connected to ground & pin 2 carries the signal.
Note that there is a lot of equipment (particularly in the US) that has pin 2 & 3 designations reversed (i.e. 3 hot, 2 cold).
Manufacturers are adopting the Standard on all new equipment.



As seen from the front of connectors

XLR/CANNON PLUGS, SOCKETS & ADAPTORS

3 Pin Line

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
3 Pin Black - Male	PP1012	$5.50	$4.95	$4.40
3 Pin Black - Female	PS1015	$5.95	$5.35	$4.75
3 Pin R/A Black - Male	PP1020	$12.95	$11.45	$9.95
3 Pin R/A Black - Female	PS1022	$12.95	$11.45	$9.95

Waterproof IP67 XLR Line Connectors

A matching IP67 waterproof plug and socket suitable for harsh environments.Great for use with PA gear and cabling that are used in outdoor conditions.

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
3 Pin Black - Line Plug IP67	PP1013	$11.95	$10.45	$9.45
3 Pin Black - Line Socket IP67	PS1017	$9.95	$8.75	$7.75

Combo XLR / 6.35mm Stereo Socket Switched

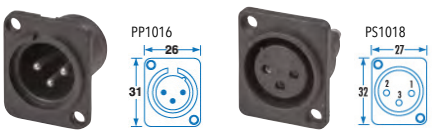
Combined 3 pole XLR & 6.35mm stereo jack for balanced microphone or line. It will accept 6.35mm mono, 6.35mm stereo or 3-pin male XLR. Suits D-series panel cut-outs.

- Non-locking - Panel or PCB mounting
- Switched - Independent inputs
- Gold plated contacts

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
3 Pole	PS1069	$8.95	$8.05	$7.15

3 Pin Chassis - Plastic

- Hole cutout 22mm
- Black ABS plastic body



Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Plastic-Male	PP1016	$4.95	$4.45	$3.95
Plastic- Female	PS1018	$4.50	$4.05	$3.60

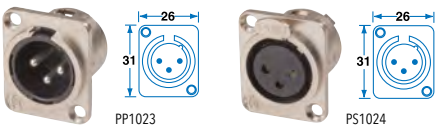
3 Pin Chassis - Metal

- Black
- Diecast body.

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Metal - Female - Hole cutout 24mm	PS1014	$7.95	$7.15	$6.35

Chassis Metal

- Small size, diecast body, nickel plated
- Hole cutout 24mm



Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Small Size Metal - Male	PP1023	$6.95	$6.25	$5.55
Small Size Metal - Female	PS1024	$7.95	$7.15	$6.35

Rubber XLR Cover Boot

This 120mm flexible boot slips over the entire XLR - XLR connection to keep water and dust out. Indispensable for protecting permanent connections from damage & dust.

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
XLR Boot Cover	PM1034	$1.65	$1.45	$1.30

XLR 3 Pin Adaptors

Type	Cat.	Qty 1+	Qty 4+	Qty 10+
Male	PA3684	$13.95	$12.45	$10.95
Female	PA3686	$14.95	$13.45	$11.95

XLR to 6.5mm Plug Adaptors

High quality, metal construction, ideal for converting microphone leads to 6.5mm plugs.

Type	Cat.	Qty 1+	Qty 4+	Qty 10+
Male	PA3680	$9.95	$8.95	$7.95
Female	PA3682	$12.95	$11.35	$10.35

XLR to RCA Adaptors

Type	Cat.	Qty 1+	Qty 4+	Qty 10+
Male	PA3800	$9.95	$8.75	$7.75
Female	PA3802	$9.95	$8.75	$7.75

Waterproof & Dust Proof XLR Plate Mount

Suitable for wet and harsh environments. Features an IPX6 rated rubber gasket and cover to prevent ingress when not in use. Surface mount via screws, hole required for socket recess.

- Dimensions: 43(L) x 35(W) x 35(D)mm

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
3 Pin - Male	PP1014	$8.95	$8.05	$7.15

MINI XLR PLUGS & SOCKETS

3, 4 Pin Line

- Diecast body - Nickel plated

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
3 Pin - Male	PP1910	$6.95	$6.25	$5.55
3 Pin - Female	PS1924	$7.95	$7.15	$6.35
4 Pin - Male	PP1912	$6.95	$6.25	$5.55
4 Pin - Female	PS1926	$7.95	$7.15	$6.35

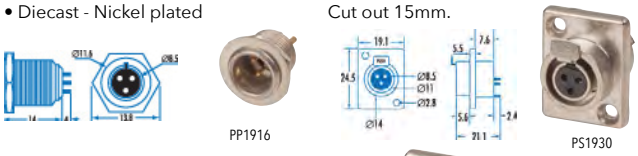
3, 4 Pin Chassis

3 PIN MALE

- Diecast - Nickel plated

3 PIN FEMALE

Cut out 15mm.

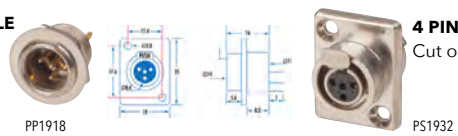


4 PIN MALE

Cut out 15mm.

4 PIN FEMALE

Cut out 15mm.



Type	Cat.	Qty 1+	Qty 10+	Qty 50+
3 Pin - Male	PP1916	$7.95	$7.15	$6.35
3 Pin - Female	PS1930	$9.95	$8.95	$7.95
4 Pin - Male	PP1918	$7.95	$7.15	$6.35
4 Pin - Female	PS1932	$9.95	$8.95	$7.95

AV WALLPLATES & INSERTS

WALLPLATES STAINLESS STEEL

No matter what audio installation you're contemplating, you're sure to find a wallplate to give your room that pro look. Finished in attractive stainless steel, these cost-effective wallplates have all the popular audio connectors, or use a blank to customise your own. Ideal for Hi-Fi installations, home studios, home theatre or just a neat solution to running an AV extension to another room.

PS0551 PS0552

XLR - Blank

Pre-punched blanks for XLR sockets.

- Sockets not included

Type	Cat.	Qty 1+	Qty 2+	Qty 5+
Single Blank	PS0551	$4.95	$4.45	$3.95
Double Blank	PS0552	$5.50	$4.95	$4.40

XLR - Loaded

Pre-punched wallplate with loaded XLR socket(s).

p.B169 more wallplates
p.B170 suitable plaster wall bracket LT3033

PS0553 PS0554

Type	Cat.	Qty 1+	Qty 2+	Qty 5+
Single 3 pin Female XLRs	PS0553	$7.95	$7.15	$6.35
Double 3 pin Female XLRs	PS0554	$11.95	$10.45	$9.45

WALLPLATES & SOCKETS

DVI Wallplate Socket with 4 Keystone Ports

Features a DVI socket to socket joined to the wallplate with standard D-sub screws as well as 4 keystone ports. Expand your wallplate with a combination of other required sockets.

- Dimensions: 115(L) x 70(W)mm

p.B170 more wallplates

Type	Cat.	Qty 1+	Qty 5+
DVI 4 Port	YN8057	$6.95	$6.25

Keystone Wallplates

Flush type wallplates accept our standard keystone 110 jacks. Fits standard Australian switch plate installation hardware and screw centres, making it perfect for easy flush installation on plasterboard or other cavity walls.

- Supplied without keystone jacks
- Dimensions: 70(W) x 114(H) x 6(D)mm

YN8050 YN8054 YN8058

Type		Cat.	Qty 1+	Qty 5+	Qty 10+
Single	White	YN8050	$1.95	$1.75	$1.55
Double	White	YN8052	$1.95	$1.75	$1.55
Triple	White	YN8054	$1.95	$1.75	$1.55
Quad	White	YN8056	$1.95	$1.75	$1.55
6 Way	White	YN8058	$1.95	$1.75	$1.55

KEYSTONE INSERTS

Inserts for Keystone Wallplates

A range of inserts to cater for computer and Audio video applications. They fit standard 110 keystone wallplates and allow you to configure your installation any way you like.

p.B169 - keystone communication sockets

PS0749 PS0753 PS0795 PS0761

PS0763 PS0764 PS0765 PS0767 PS0794 PS0798 PS0769 PS0771 PS0796

PS0797 PS0773 PS0774 PS0775 PS0777 PS0779 PS0799 PS0800

Type	Cat.	Qty 1+	Qty 5+	Qty 10+
TOSLINK - TOSLINK	PS0749	$3.95	$3.55	$3.15
USB - USB Female	PS0753	$4.95	$4.45	$3.95
USB - USB Right Angle	PS0795	$5.95	$5.35	$4.75
F81 - F81 - White	PS0761	$2.95	$2.65	$2.35
BNC - BNC - White	PS0763	$2.95	$2.65	$2.35
RCA - RCA - White	PS0764	$3.25	$2.90	$2.60
RCA - RCA - Red	PS0765	$3.25	$2.90	$2.60
RCA - RCA - Yellow	PS0767	$3.25	$2.90	$2.60
RCA - RCA - Blue	PS0794	$3.25	$2.90	$2.60
RCA - RCA - Green	PS0798	$3.25	$2.90	$2.60

Type	Cat.	Qty 1+	Qty 5+	Qty 10+
S-Video - S Video	PS0769	$1.95	$1.75	$1.55
HDMI - HDMI - White	PS0771	$9.95	$8.95	$7.95
HDMI - HDMI - Right Angled	PS0796	$9.95	$8.95	$7.95
HDMI - HDMI - Flylead	PS0797	$10.95	$9.45	$8.45
USB - USB - White	PS0773	$4.95	$4.45	$3.95
4mm Banana - Red	PS0774	$3.95	$3.55	$3.15
4mm Banana - Black	PS0775	$3.95	$3.55	$3.15
3.5mm Stereo Socket	PS0777	$3.95	$3.55	$3.15
Blank Insert	PS0779	$0.35	$0.32	$0.28
USB 3.0-USB 3.0 - White	PS0799	$11.95	$10.45	$9.45
USB-C 3.2 - USB-C 3.2 **NEW**	PS0800	$14.95	$13.45	$11.95

Automatic Accounts

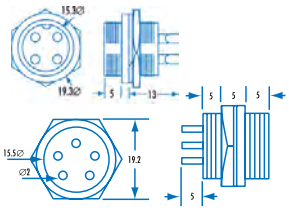
For Schools, Colleges, Universities, Government Departments, Radio & TV Stations - we'll open a 30-day account for you automatically. Just fill in the account form or apply online.

MULTI-PIN AUDIO/VIDEO CONNECTORS

MICROPHONE SERIES PLUGS & SOCKETS

Microphone Chassis Male

- Solid metal machined body
- Nickel plated
- 10A max 32VDC



PP2013 PP2010 PP2017

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
2 Pin	PP2013	$3.50	$3.15	$2.80
4 Pin	PP2010	$3.50	$3.15	$2.80
5 Pin	PP2017	$3.50	$3.15	$2.80

Microphone Line FEMALE

- Solid metal machined body
- Nickel plated
- Also suitable for secure, low voltage DC connection
- 10A max 32VDC

PS2014 PS2012 PS2018

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
2 Pin	PS2014	$3.75	$3.35	$3.00
4 Pin	PS2012	$3.75	$3.35	$3.00
5 Pin	PS2018	$3.75	$3.35	$3.00

DIN PLUGS & SOCKETS

DIN Plugs & Sockets

Originally a German standard, these connectors are available in versions from 2 to 13 pins. Once widely used, these are now seen less on AV equipment. The 2 pin version is used for some loudspeakers and 5 pin version is still used for connecting MIDI electronic musical instruments & older PC keyboards.

Line DIN Plugs

PP0300 PP0302 PP0304 PP0305 PP0306 PP0308 PP0310 PP0312

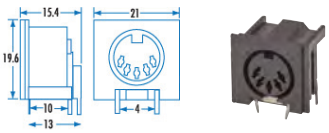
Type	Cat.	Qty 1+	Qty 10+	Qty 50+
2 Pin	PP0300	$1.25	$1.10	$1.00
3 Pin	PP0302	$1.45	$1.30	$1.15
5 Pin	PP0304	$1.65	$1.45	$1.30
5 Pin 240°	PP0305	$1.65	$1.45	$1.30
5 Pin Premium Die Cast	PP0306	$3.75	$3.30	$2.95
6 Pin	PP0308	$2.35	$2.10	$1.85
7 Pin	PP0310	$2.35	$2.10	$1.85
8 Pin	PP0312	$2.35	$2.10	$1.85

Line Sockets - 5, 6, 8 Pin

PS0352 PS0355 PS0358

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
5 Pin	PS0352	$1.95	$1.75	$1.55
6 Pin	PS0355	$2.45	$2.15	$1.95
8 Pin	PS0358	$2.95	$2.60	$2.30

5 Pin Right Angle PCB Socket

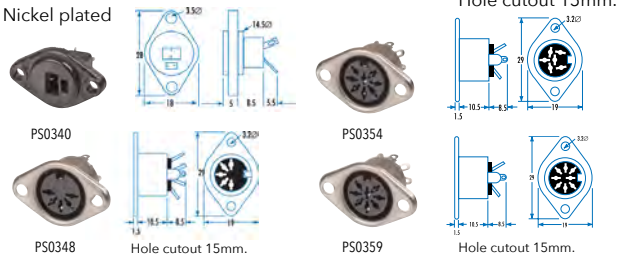


Type	Cat.	Qty 1+	Qty 10+	Qty 50+
5 Pin Right Angle	PS0350	$1.95	$1.75	$1.55

2, 5, 6, 8 Pin Panel Sockets

- Nickel plated

Hole cutout 15mm.



PS0340 PS0354 PS0348 Hole cutout 15mm. PS0359 Hole cutout 15mm.

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
2 Pin	PS0340	$1.60	$1.40	$1.25
5 Pin	PS0348	$1.80	$1.60	$1.40
6 Pin	PS0354	$2.20	$1.95	$1.75
8 Pin	PS0359	$2.95	$2.60	$2.30

MINI DIN PLUGS, SOCKETS & ADAPTORS

Mini DIN Plugs

PP0362 PP0364 PP0365 PP0366 PP0370

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
4 Pin - Nickel Plated	PP0362	$4.95	$4.45	$3.95
4 Pin - Nickel Plated	PP0364	$2.45	$2.20	$1.95
4 Pin - Gold Plated - 6mm	PP0365	$5.95	$5.25	$4.75
6 Pin - Nickel Plated	PP0366	$2.95	$2.65	$2.35
8 Pin - Nickel Plated	PP0370	$2.45	$2.20	$1.95

4 & 6 Pin Line Sockets

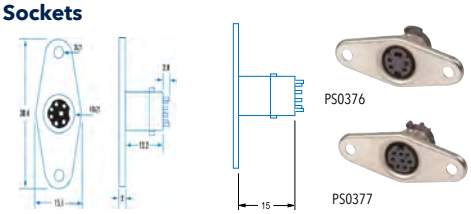
PS0372 PS0368

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
4 Pin	PS0372	$2.45	$2.20	$1.95
6 Pin	PS0368	$2.45	$2.20	$1.95

4 & 6 Pin Panel Sockets

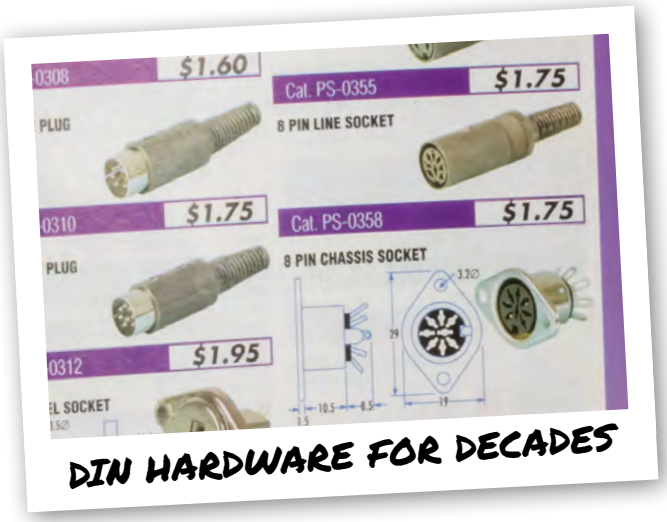
Cutout 10mm.

- Nickel plated



PS0376 PS0377

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
4 Pin	PS0376	$2.75	$2.45	$2.15
6 Pin	PS0377	$2.75	$2.45	$2.15



All prices are in Australian Dollars

For next day delivery, or Click and Collect, see page A4

COAXIAL - PAL PLUGS & SOCKETS

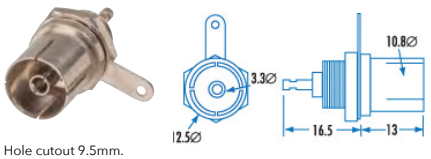
These are the standard aerial connectors for TVs and video recorders. They are often called "Belling-Lee" or "PAL" connectors.
- Generally Nickel plated
- Some are machined out of aluminium

75 Ohm Line Plugs

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Plastic	PP0600	$1.95	$1.75	$1.55
Nickel Plated	PP0602	$2.75	$2.45	$2.20
Gold Plated	PP0604	$7.95	$6.95	$6.25
R/A Solderless	PP0606	$2.95	$2.60	$2.30
Crimp - RG59	PP0607	$2.95	$2.60	$2.30
Crimp - RG6	PP0608	$2.95	$2.60	$2.30
Joiner	PS0622	$1.95	$1.75	$1.55

75 Ohm Chassis Mount Socket

- Nickel plated
- High quality product



Hole cutout 9.5mm.

Cat.	Qty 1+	Qty 10+	Qty 50+
PS0628	$2.95	$2.60	$2.30

75 Ohm Line Sockets

- Nickel plated

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Plastic	PS0610	$1.75	$1.55	$1.40
Nickel Plated	PS0614	$2.75	$2.45	$2.20
Right Angle Solderless	PS0612	$3.45	$3.05	$2.75
Crimp - RG59	PS0611	$2.75	$2.45	$2.15
Crimp - RG6	PS0613	$2.75	$2.45	$2.15
Gold	PS0605	$5.95	$5.35	$4.75
Joiner	PS0620	$1.95	$1.75	$1.55

75 Ohm Cable Joiner

- Hardwire connection for almost any braided coax or screened audio cable up to 7mm dia.
- Only modest cord anchoring

Cat.	Qty 1+	Qty 4+	Qty 10+
PS0618	$2.95	$2.60	$2.30

click & collect

Click and Collect is now available at all Jaycar stores! Simply place your order online and the team at your local store will get the order together for you, ready to collect in just 1 hour!

COAXIAL - ADAPTORS

Type	Cat.	Qty 1+	Qty 4+	Qty 10+
PAL Plug to RCA Socket	PA3675	$3.95	$3.45	$3.15
PAL Socket to PAL Socket	PS0620	$1.95	$1.75	$1.55
PAL Plug to PAL Plug	PS0622	$1.95	$1.75	$1.55
PAL Plug to PAL Socket - Right Angle	PA3679	$4.95	$4.45	$3.90
F Socket to PAL Socket	PA3656	$3.95	$3.45	$3.15
PAL Plug to F-Type Socket	PA3653	$3.95	$3.45	$3.15
PAL Plug to F-Type Socket - Right Angle	PA3673	$4.95	$4.45	$3.90
F-Type Plug to PAL Socket	PA3672	$1.95	$1.75	$1.55
F-Type Plug to PAL Plug	PA3671	$2.95	$2.60	$2.30
F-Type Plug to F-81 Socket - Right Angle	PA3674	$3.95	$3.45	$3.15
F-Type Plug to Plug	PA0633	$1.95	$1.75	$1.55

COAXIAL - F TYPE PLUGS, SOCKETS & ADAPTORS

Used mainly for RF signals such as those for satellite dishes, cable boxes or TV aerials. The highest quality connections between your cable/satellite wallplate output and the cable/satellite box. Standard emerged from the US cable TV industry. Now the Aust./NZ standard.

F Type Plugs

F connectors recommended for all new TV installations
- Suits RG59 or RG6 cable
- Nickel plated

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Suits RG59	PP0640	$0.95	$0.85	$0.76
Suits RG6	PP0641	$1.25	$1.10	$1.00
F-Type Crimp Plug for RG59	PP0702	$1.75	$1.55	$1.40
F-Type Crimp Plug for RB6 Cable	PP0704	$1.75	$1.55	$1.40
F-Type Waterproof Compression Plug for RG6 Cable	PP0708	$2.25	$2.00	$1.80

RELATED PRODUCT

Heavy Duty Coax Crimping Tool

This tool is specifically designed for crimping F, N, BNC, TNC, UHF, ST, SC & SMA connectors onto coax cable for TV and communications applications. It also has adjustable crimp force and 3 hex dies: 2.54mm, 9.12mm & 10.3mm

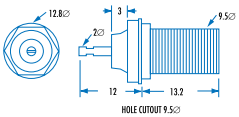
Cat.	Qty 1+	Qty 3+	Qty 6+
TH1832	$34.95	$30.95	$27.95

p.A38 - more crimping tools
p.A229 - coaxial cable

COAXIAL - F-TYPE PLUGS, SOCKETS & ADAPTORS

F-Type Chassis Socket

Hole cutout 9.5mm.
- Nickel plated



Type	Cat.	Qty 1+	Qty 10+	Qty 50+
F-61 Chassis	PS0645	$1.75	$1.55	$1.40

F-Type Type screw-On Plugs

These are ideal crimpless but strong F-plugs for low volume applications. Highly recommended. Simply strip coax back about 12mm, fold braid/foil back over the plastic outer sheath. Trim about 8mm of foam insulation from centre conductor. Then simply screw the knurled connector on the cable until you see sufficient centre conductor out of the front of the connector.
- Nickel plated

PP0637

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Suits RG59 Cable	PP0637	$1.75	$1.55	$1.40
Suits RG6 Cable	PP0638	$1.75	$1.55	$1.40

Crimpless F-Type Plug to RG6

No crimper or soldering required.

Cat.	Qty 1+	Qty 10+	Qty 50+
PP0671	$2.95	$2.60	$2.30

F-Type Tool-Less Compression Crimp Connector

No crimping tool required. Just strip back the outer and inner sheath, fold the braid back and push the connector on. The crimp is reliable with high mechanical strength and will never come off. Suitable for RG6 quad shield coax.

Cat.	Qty 1+	Qty 10+	Qty 50+
PP0677	$2.50	$2.21	$1.95

F-Type Line Plug - Solderless Type

Screw assembly - no soldering is required.

Cat.	Qty 1+	Qty 10+	Qty 50+
PP0709	$3.50	$3.15	$2.80

F-Type Type 75 Ohm Dummy Load

Simply screw on to unused ports of splitters, etc to maintain good VSWR.
- Nickel plated

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Dummy Load	PP0639	$1.75	$1.55	$1.40

F-Type Inline Joiner

- Nickel plated

Type	Cat.	Qty 1+	Qty 4+	Qty 10+
F-81 Inline Joiner	PS0646	$1.95	$1.75	$1.55

F-Type Inline Joiner - Foxtel Approved

- Socket to Socket
- Foxtel Approved

Cat.	Qty 1+	Qty 4+	Qty 10+
PP0648	$5.25	$4.70	$4.20

Tool-Less F-Type RG6 Plug

Just strip the end of your RG6 coax cable and apply the connector. No crimping tools, no soldering and nothing could be simpler!

Cat.	Qty 1+	Qty 10+	Qty 50+
PP0601	$1.95	$1.75	$1.55

FME

FME Line

As used on some mobile phone car kits.
- Crimp
- Nickel plated
- Gold centre pin

PP0710 PS0712

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Plug	PP0710	$4.95	$4.45	$3.90
Socket	PS0712	$3.95	$3.45	$3.15

FME - TNC

Female Adaptor

Type	Cat.	Qty 1+	Qty 4+	Qty 10+
Female to Female	PA0619	$6.95	$6.25	$5.55

FME Plug to PL259 UHF Plug Adaptor

Type	Cat.	Qty 1+	Qty 4+	Qty 10+
Plug to Plug	PA0611	$9.95	$8.95	$7.95

TNC

Line Plugs

PP0664

PP0665

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Solder	PP0664	$3.95	$3.45	$3.15
Crimp - RG58U	PP0665	$3.95	$3.45	$3.15
Crimp - RG59U	PP0667	$3.95	$3.45	$3.15

N TYPE

PP0672

PS0673

PS0674

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Line Plug - suits RG58U	PP0672	$6.95	$6.25	$5.55
Line Socket - suits RG58U	PS0673	$7.95	$7.15	$6.35
Panel Socket	PS0674	$6.95	$6.25	$5.50

All products on this page generally nickel plated

RELATED PRODUCT

Hex Ratchet Crimping Tool

Heavy duty ratchet tool designed for crimping F, N, BNC, TNC, UHF, ST, SC & SMA connectors onto RG6, RG58 or RG59 coax cable. It features adjustable crimping force and ratchet mechanism for complete repeatability. Four hex crimping dies: 1.72mm, 5.49mm, 8.23mm and 9.14mm.

1 YEAR WARRANTY

p.A38 more crimping tools

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1833	$39.95	$35.90	$31.90

BNC

BNC plugs lock on to the socket and are used for some digital audio connections as well as for video connections, particularly CCTV.

Male Line Plugs

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Male Line Plugs	PP0650	$3.75	$3.35	$3.00
Crimp RG59	PP0688	$3.95	$3.55	$3.15
Crimp RG6	PP0689	$3.95	$3.55	$3.15
Solderless Type	PP0652	$4.95	$4.45	$3.95

Crimpless BNC Plug to RG6

No crimper or soldering required.
- Crimpless BNC Plug to RG6

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Crimpless BNC Plug to RG6	PP0675	$3.50	$3.15	$2.80

Male Crimp Plugs

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
0.7mm Centre Pin - suits RG59	PP0647	$2.95	$2.65	$2.35
0.9mm Centre Pin - suits Belden	PP0651	$2.95	$2.65	$2.35
Crimp Type - RG58	PP0649	$2.95	$2.65	$2.35
Crimp Type - RG6	PP0657	$2.95	$2.65	$2.35
Compression Crimp	PP0669	$3.50	$3.15	$2.80

Crimp Plug Boot

Suits - PP0695 Mini UHF plug, PS0660 BNC female line crimp, PP0649 BNC RG58 Crimp plug & PP0651 BNC RG59 Crimp plug.

	Cat.	Qty 1+	Qty 5+	Qty 20+
	PM0648	$1.95	$1.75	$1.55

Male Twist On Plugs

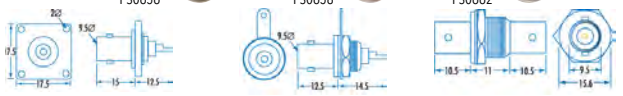
Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Twist on for RG59 0.9mm centre	PP0678	$3.95	$3.55	$3.15
Twist on for RG6	PP0679	$3.95	$3.55	$3.15
Terminator plug with 50Ω resistor	PP0655	$4.95	$4.45	$3.90

Line Sockets

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Line Socket - RG58	PS0660	$3.95	$3.55	$3.15
Line Socket - RG6	PS0659	$3.95	$3.55	$3.15
Joiner	PS0663	$3.95	$3.45	$3.15

Chassis Sockets

Hole cutout 9.5mm.



Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Square Mount	PS0656	$2.95	$2.60	$2.30
Single Hole Mount	PS0658	$3.95	$3.45	$3.15
Double Female Mount	PS0662	$4.95	$4.45	$3.95

BNC PCB

- PCB connect with optional panel screw fixing

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Panel Screw	PS0661	$5.95	$5.35	$4.75

BNC with Terminals

Type	Cat.	Qty 1+	Qty 4+	Qty 10+
Screw Terminal	PA3715	$4.95	$4.45	$4.00
Spring Terminal	PA3716	$4.95	$4.45	$4.00

BNC Adaptors

Type	Cat.	Qty 1+	Qty 4+	Qty 10+
BNC Plug to F59 Plug Adaptor	PA3661	$4.95	$4.45	$3.90
BNC Adaptor 1 Male to 2 Female - T	PA3662	$5.95	$5.25	$4.75
BNC Adaptor 1 Male to 2 Female - Y	PA3664	$9.95	$8.75	$7.75
BNC T Adaptor	PA3660	$4.95	$4.45	$3.90
BNC Male to Double Binding Sockets/ Banana Sockets	PA3666	$8.95	$7.95	$6.95
BNC Plug to BNC Plug Adaptor	PA3665	$4.95	$4.45	$3.90
BNC Plug to F-81 Socket	PA3651	$2.25	$2.00	$1.80
BNC Plug to RCA Socket	PA3654	$3.95	$3.45	$3.15
PL259 Plug to BNC Socket	PA3652	$6.95	$6.25	$5.50
PL259 Plug to BNC Plug	PA0681	$3.95	$3.45	$3.15
BNC Plug to BNC Socket R/A	PA3663	$4.95	$4.45	$3.90

RJ11/12 MODULAR

50µ" Gold Contact.

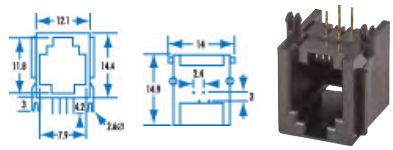
4 PIN FOR STRANDED CABLE
4/4 - RJ11

6 PIN FOR STRANDED CABLE
6/6 - RJ12

Type	Cat.	Qty 1+	Qty 5+	Qty 20+
RJ11 - Pack of 5	PP1430	$2.65	$2.35	$2.10
RJ11 - Pack of 50	PP1431	$19.95	$17.95	$15.95
RJ12 - Pack of 5	PP1432	$3.25	$2.90	$2.60
RJ12 - Pack of 50	PP1433	$24.95	$22.45	$19.95

PCB Modular Sockets

Side entry.
Not ACMA Approved



Type	Cat.	Qty 1+	Qty 10+	Qty 50+
4/4 - RJ11	PS1470	$1.85	$1.65	$1.45
6/6 - RJ12	PS1474	$2.25	$2.00	$1.80

RJ45 MODULAR

Modular Plugs

50µ" Gold Contact

8/8 - RJ45

- Not ACMA Approved

Pack	Cat.	Qty 1+	Qty 5+	Qty 20+
10	PP1436	$7.95	$6.95	$6.25

SCREENED 8 PIN FOR STRANDED CABLE

8P8C with full screening and round cable entry for connection to STP cable.

ACMA Approved

Pack	Cat.	Qty 1+	Qty 5+	Qty 20+
10	PP1437	$14.95	$13.35	$11.70

RJ45 MODULAR PLUGS FOR STRANDED/SOLID CAT6 CABLE PK10

RJ45 Modular Plugs for Stranded and Solid Cat6 Cable. Pack of 10.

ACMA Approved

Type	Pack	Cat.	Qty 1+	Qty 5+	Qty 20+
RJ45 Stranded	10	PP1447	$14.95	$13.45	$11.95

8 PIN FOR FLAT STRANDED CABLE

8/8 - RJ45

ACMA Approved

PP1434

8 PIN FOR ROUND SOLID CORE CABLE

8/8 RJ45 Suits Cat5e

ACMA Approved

PP1438

Type	Pack	Cat.	Qty 1+	Qty 5+	Qty 20+
RJ45 Stranded	5	PP1434	$5.95	$5.25	$4.75
RJ45 Stranded	50	PP1435	$29.95	$26.95	$23.95
RJ45 Solid	6	PP1438	$6.95	$6.25	$5.50
RJ45 Solid	50	PP1439	$37.95	$33.95	$29.95

RJ45 BOOTS

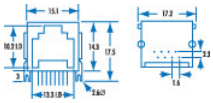
A packet of boots to suit RJ45 8/8 plugs.

PM1441

Pack	Cat.	Qty 1+	Qty 5+	Qty 20+
10	PM1441	$4.95	$4.45	$4.15
50 Blue	PM1442	$17.95	$15.95	$13.95

8 PIN PCB MODULAR SOCKET

- Side entry
- Not ACMA approved



Type	Cat.	Qty 1+	Qty 10+	Qty 50+
8/8 - RJ45	PS1478	$2.75	$2.45	$2.20

Waterproof RJ45 Cable Connector Housing

Allows you to join two Cat5e cables while providing a robust and waterproof connection. Use around the garage, factory or workshop to avoid dust or water ingress, or to survive the knocks and bumps around the office. Includes 2-way Cat5 joiner, but will also accommodate any connector that fits within the internal dimensions of the housing.

- IP Rating: IP68
- Accepts cables: 4 - 7mm Dia
- Dimensions: 120(L x 35(Dia.)mm

*Not ACMA approved.

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 4+	Qty 10+
2 Way	PS4064	$22.95	$20.45	$17.95

TELEPHONE

Telephone 610 Wall Socket

For other telephone leads, adaptors - see our Computer & Multimedia section

- Blister pack
- ACMA Approved

ACMA Approved

p.A240 more wallplates

** Note: not available in New Zealand.*

Type	Cat.	Qty 1+	Qty 5+	Qty 20+
610	PS1410	$6.95	$6.25	$5.50

WALLPLATES & SOCKETS

Australian / NZ Flush Plates

Our premium Australian / NZ flush plates not only accept our Cat5e jacks, they are also compatible with many other standard Australian mechanisms and jacks.

- Fits standard Australian/NZ switch plates
- Perfect for easy flush installation on Gyprock walls
- Supplied unloaded without jacks (see Cat. YN8036)
- 116(W) x 75(H) x 13(D)mm
- Will also accept Clipsal 2000 modules

Type	Cat.	Qty 1+	Qty 4+	Qty 10+
Single	YN8015	$6.95	$6.25	$5.55
Double	YN8016	$7.25	$6.50	$5.80

RJ12 IDC Socket for Flush Plates

Voice grade RJ12 6P4C IDC jack with 2 IDC connections per contact allowing easy loop-in, loop-out for typical voice applications. Compatible with most standard Australian flush plates. Rear termination with IDC impact tool.

Cat.	Qty 1+	Qty 5+	Qty 20+
YN8035	$9.95	$8.75	$7.75

Cat5e IDC Jack to Suit Australian & NZ Style Flush Plates

Our premium Cat5e IDC data jack designed to suit our wallplates shown above. They also suit many other brands of Australian/NZ flush plates.

Rear terminated with 110 or Krone impact tool

- T568A & T568B colour coding for easy installation
- Suit YN8015/16 flush plates

ACMA Approved

Cat.	Qty 1+	Qty 4+	Qty 10+
YN8036	$9.95	$8.75	$7.75

KEYSTONE SOCKETS

p.A240 keystone wallplates & other keystone connectors

Inserts for Keystone Wallplates

YN8026

YN8027

YN8028

YN8029

Type	Cat.	Qty 1+	Qty 5+	Qty 10+
RJ11	YN8026	$3.95	$3.55	$3.15
RJ12	YN8027	$3.95	$3.55	$3.15
RJ45 Cat5e	YN8028	$3.95	$3.55	$3.15
RJ45 Cat6	YN8029	$3.95	$3.55	$3.15

110 Keystone Jack

Suitable for use with our keystone wall plates and keystone surface boxes.

- For termination with ISBY impact tool and has combined 568A and T568B colour coding for easy installation
- White in colour

ACMA Approved

Cat.	Qty 1+	Qty 4+	Qty 10+
YN8030	$9.95	$8.75	$7.75

Keystone Surface Box

Side entry surface mount boxes accept our standard keystone 110 jacks.

- Snap-on cover for easy access to wiring
- Double sided tape for easy installation
- Supplied unloaded without keystone jacks

ACMA Approved

YN8022

W x H x D (mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
Single 30 x 60 x 26	YN8022	$6.25	$5.60	$5.00
Double 55 x 60 x 26	YN8024	$6.50	$5.85	$5.20

USB/HDMI

Type A & Type B Plugs
With solder lugs.

PP0790

PP0792

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
A	PP0790	$2.45	$2.15	$1.95
B	PP0792	$2.45	$2.15	$1.95

Type A & Type B PC Mount Sockets
4P4C.

PS0916

PS0920

PS0922

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
A	PS0916	$2.95	$2.60	$2.30
B	PS0920	$2.95	$2.60	$2.30
Micro B	PS0922	$2.95	$2.60	$2.30

Type A IP67 RATED PLUG CABLES
Industrial USB connectors encased in robust housing with IP67 seal.
- Current rating 1.5A
- -40°C to +105°C
- PBT UL94V-0 body

LTW®

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
A Male 1m Lead	PP0784	$13.95	$12.55	$11.15

Type A Panel Mount USB Sockets
Panel-mounting Type A USB socket.
- Suits panels up to 10mm thick
- Mounting hole 20mm

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
A Female	PS0782	$19.95	$17.95	$15.95

PCB Mount Plugs & Sockets
A range of PC mount connectors to suit the latest USB & HDMI technologies.

PS0924

PP0925

PS0928

PS0930

USB

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Type-A 3.0 Male	PP0923	$3.95	$3.55	$3.15
Type-A 3.0 Female	PS0924	$3.95	$3.55	$3.15
Type-A Micro 3.0 Male	PP0925	$3.95	$3.55	$3.15
Type-A Micro 3.0 Female	PS0926	$3.95	$3.55	$3.15
Type-B 3.0 Female	PS0928	$3.95	$3.55	$3.15
Type-C 2.0/3.0/3.1 Male	PP0929	$3.95	$3.55	$3.15
Type-C 3.1 Female	PS0930	$3.95	$3.55	$3.15

PP0941

PS0942

PP0945

PS0944

HDMI

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Type-A Male	PP0941	$3.95	$3.55	$3.15
Type A Female	PS0942	$3.95	$3.55	$3.15
Micro Male	PP0945	$3.95	$3.55	$3.15
Micro Female	PS0946	$3.95	$3.55	$3.15
Mini Plug	PP0943	$3.95	$3.55	$3.15
Mini Female	PS0944	$3.95	$3.55	$3.15

USB Mini-B PC Mount Socket
High quality gold plated contacts.
- Quality gold plated contacts
- PCB Mount

Cat.	Qty 1+	Qty 10+	Qty 50+
PS0921	$2.95	$2.65	$2.35

USB 3.0 Type A Plug to 10-Way Terminals
USB Type A plug to a 10-way screw terminal block for temporary or prototyping applications. No soldering required.

	Cat.	Qty 1+	Qty 10+	Qty 50+
USB 3.0 Type-A	PA0956	$12.95	$11.45	$9.95

USB 2.0 Plugs to 4-Way Terminals
USB plug to a 4-way screw terminal block for temporary or prototyping applications. No soldering required.

PA0952

PA0950

PA0954

	Cat.	Qty 1+	Qty 10+	Qty 50+
USB 2.0 Micro B	PA0952	$12.95	$11.45	$9.95
USB 2.0 Mini B	PA0950	$9.95	$8.95	$7.95
USB 2.0 Type-A	PA0954	$9.95	$8.95	$7.95

SCART

Carries stereo audio, composite video, S-video & RGB signals from an AV source to your TV & also allow's recording to other sources, for example VCR's. Originated in Europe.

SCART ADAPTOR
SCART Plug to 3 RCA sockets & a S-Video Socket.

Type	Cat.	Qty 1+	Qty 4+	Qty 10+
SCART Adaptor	PA3659	$14.95	$13.35	$11.70

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SMA

SMA Connectors
• Gold plated

PP0632 PP0631 PS0634 PP0633

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Line Plug - RG58 - Crimp	PP0632	$5.65	$4.95	$4.45
Right Angle Plug - RG174 - Crimp	PP0631	$5.95	$5.25	$4.75
Line Socket - RG174 - Solder	PS0634	$4.95	$4.45	$3.90
Line Plug - RG58 - Crimp - R/A	PP0633	$5.95	$5.35	$4.75

SMA Reverse
• Gold plated

PP0590 PS0592

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Reverse Line Plug - RG174U	PP0590	$5.95	$5.25	$4.75
Reverse Line Socket	PS0592	$5.95	$5.25	$4.75

SMA Adaptors
• Nickel or Gold plated

PA0627 PA0629 PA0635

PA0616 PA0617 PA0612 PA0613

PA0620 PA0621 PA0622 PA0624 PA0615

PA0618 PA0631 PA0632 PA0630

Type	Cat.	Qty 1+	Qty 4+	Qty 10+
SMA Socket to Reverse SMA Plug	PA0627	$7.95	$7.15	$6.35
SMA Socket to Reverse SMA Socket	PA0629	$7.95	$7.15	$6.35
SMA Plug to PL259 Socket	PA0612	$8.95	$8.05	$7.15
FME Socket to SMA Socket	PA0620	$5.95	$5.35	$4.75
SMA Socket to FME Plug	PA0621	$5.95	$5.35	$4.75
SMA Plug to SMA Plug	PA0622	$6.95	$6.25	$5.55
SMA Socket to BNC Socket	PA0624	$5.95	$5.35	$4.75
SMA Socket to BNC Socket	PA0615	$6.95	$6.25	$5.55
N Plug to SMA Socket	PA0616	$7.95	$7.15	$6.35
N Socket to SMA Socket	PA0617	$7.95	$7.15	$6.35
SMA Coupler	PA0635	$7.95	$7.15	$6.35
SMA Socket to PL259 UHF Plug	PA0613	$9.95	$8.95	$7.95
SMA Plug to FME Plug	PA0618	$7.95	$7.15	$6.35
SMA Plug to SMA Plug - R/A	PA0631	$9.95	$8.95	$7.95
SMA Socket to SMA Socket - R/A	PA0632	$9.95	$8.95	$7.95
SMA Plug to Reverse SMA Socket	PA0630	$7.95	$7.15	$6.35

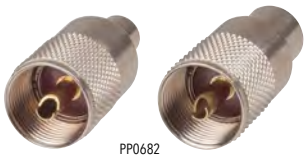
UHF PLUGS & SOCKETS

UHF - Mini Male Line Plugs
• Nickel plated

PP0695

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Crimp - RG58U	PP0695	$4.95	$4.45	$3.90
Crimp - RG59	PP0694	$4.95	$4.45	$3.90

UHF Line Plugs - PL259 Type
• Nickel plated


PP0680 PP0682

	Cat.	Qty 1+	Qty 10+	Qty 50+
Solder - RG-58U - with Reducer	PP0680	$3.50	$3.15	$2.80
Solder - RG-8U	PP0682	$3.50	$3.15	$2.80

UHF Joiner & Socket
• Nickel plated

PS0690 PS0686

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Joiner - Double Female	PS0690	$3.95	$3.45	$3.15
SO239 Chassis Socket	PS0686	$3.50	$3.15	$2.80

40YRS OF UHF HARDWARE

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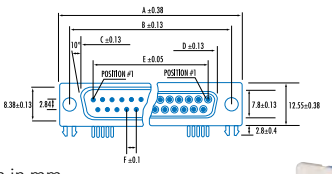
D-SUB DATA CONNECTORS

D CONNECTORS PLUGS, SOCKETS & HARDWARE

D - IDC



PP0821

PS0846

Sizes shown in mm.

Size	A	B	C	D	E	F
9 Pin	30.81	24.99	16.92	16.24	11.09	2.74
25 Pin	53.04	47.04	38.96	38.38	33.24	2.77

Type	Pin	Cat.	Qty 1+	Qty 10+	Qty 50+
IDC Plug	9 Pin	PP0802	$3.95	$3.45	$3.15
IDC Plug	15 Pin	PP0821	$4.45	$3.95	$3.45
IDC Plug	25 Pin	PP0842	$4.65	$4.15	$3.60
IDC Socket	9 Pin	PS0805	$3.95	$3.45	$3.15
IDC Socket	15 Pin	PS0825	$4.45	$3.95	$3.45
IDC Socket	25 Pin	PS0846	$4.65	$4.15	$3.60

D Male / Female
Male Solder

All 'D' connectors have quality gold plated contacts & nickel plated shells.

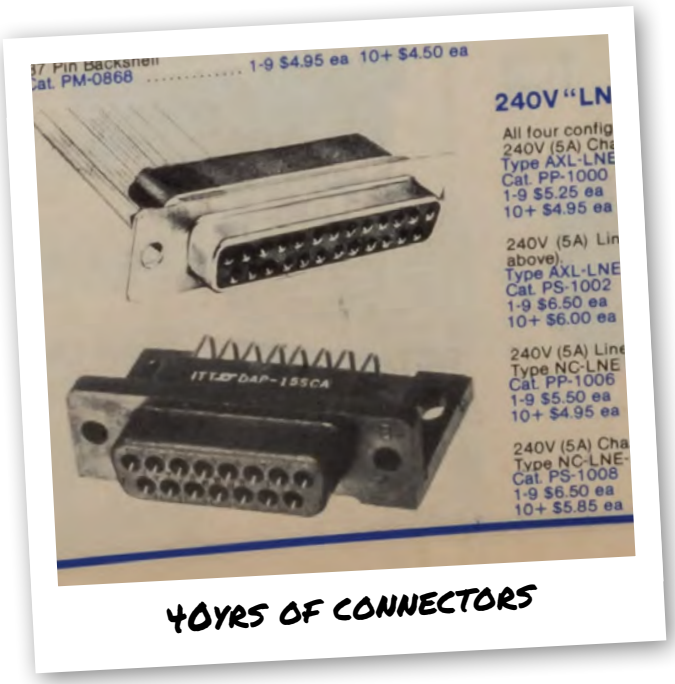
PP0800

PS0804

PP0843

PS0845

Type	Pin	Cat.	Qty 1+	Qty 10+	Qty 50+
Plug Solder	9 Pin	PP0800	$1.45	$1.30	$1.15
Plug Solder	15 Pin	PP0820	$1.95	$1.75	$1.55
Plug Solder	15HD Pin	PP0831	$3.65	$3.15	$2.90
Plug Solder	25 Pin	PP0840	$1.95	$1.75	$1.55
Plug Solder	37 Pin	PP0860	$4.95	$4.45	$3.90
Socket Solder	9 Pin	PS0804	$1.95	$1.75	$1.55
Socket Solder	15 Pin	PS0824	$1.95	$1.75	$1.55
Socket Solder	15HD Pin	PS0832	$3.65	$3.15	$2.90
Socket Solder	25 Pin	PS0844	$1.95	$1.75	$1.55
Socket Solder	37 Pin	PS0864	$4.95	$4.45	$3.90
R/A Plug Solder	9 Pin	PP0803	$2.95	$2.60	$2.30
R/A Plug Solder	25 Pin	PP0843	$3.65	$3.15	$2.90
R/A Socket Solder	9 Pin	PS0806	$2.95	$2.60	$2.30
R/A Socket Solder	25 Pin	PS0845	$3.65	$3.15	$2.90



D-Sub Socket IP67 Harsh Environment

Robust D-Sub socket housed in industrial body and IP67 waterproof housing.

- Current rating 5A
- -40°C to +105°C
- Gold flash plating on contacts

LTW

Type	Pin	Cat.	Qty 1+	Qty 10+
Socket Solder	25 Pin	PS1220	$14.95	$13.45

D Backshells

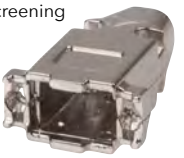
Plastic

Screws supplied.

Metal

Quality heavy duty metal backshells.

- Ideal where RF screening is required
- Rear entry



ABS Flameproof D Backshells

Top quality grey back shells with two cable entries.

- Rear or side entry
- Simply push out the tab required
- Supplied with 2 long finger screws, cable clamp screws and hood fixing screws
- A quality range of backshells

Type	Pin	Cat.	Qty 1+	Qty 10+	Qty 50+
Plastic D Backshells	9 Pin	PM0808	$2.25	$1.95	$1.80
Plastic D Backshells	15 Pin	PM0828	$2.45	$2.15	$1.95
Plastic D Backshells	25 Pin	PM0848	$2.95	$2.60	$2.30
Plastic D Backshells	37 Pin	PM0868	$3.95	$3.45	$3.15
Metal D Backshells	9 Pin	PM0812	$3.95	$3.45	$3.15
Metal D Backshells	15 Pin	PM0833	$4.95	$4.45	$3.90
Metal D Backshells	25 Pin	PM0847	$6.95	$6.25	$5.50
ABS D Backshells	9 Pin	PM0810	$2.95	$2.60	$2.30
ABS D Backshells	15 Pin	PM0830	$3.25	$2.90	$2.60
ABS D Backshells	25 Pin	PM0850	$3.95	$3.45	$3.15

D Hardware

Sub Hex Nut Extenders

Pkt of 8 pairs (16 pcs) 6mm hex nut extenders for D connectors.

- Double female screw adaptor
- Pack of 8 pairs

PM0857

Thumb Screws for D Backshells

Pkt of 4 pairs (8 pcs) of universal thumb screws for D backshells.

- Total length 44mm
- Pack of 4 pairs

PM0859

Locking Nuts for D Connectors

Packets of 5 pairs (10 pcs.) of D locking nuts.

- Includes screws, nuts and washers
- 6mm length
- Pack of 5 pairs

PM0852

Jack Screw to Suit D-Sub

- 13mm length

PM0854

Type	Pack	Cat.	Qty 1+	Qty 10+	Qty 50+
Hex Nut Extenders	8	PM0857	$4.95	$4.45	$3.90
Thumb Screws	4	PM0859	$4.95	$4.45	$3.90
Jack Screw	EA	PM0854	$0.75	$0.65	$0.60
Jack Screw Locking	5	PM0852	$4.95	$4.45	$3.90

Locking Nut Set for D Connectors

Suits D connectors.

- Length 13mm

Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Hex Nut Extenders	PM0855	$2.95	$2.60	$2.30

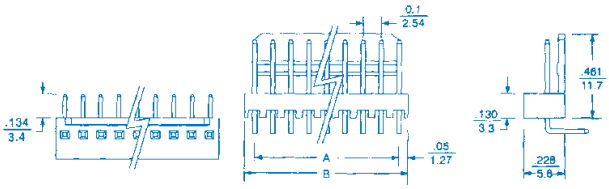
HEADER CONNECTORS

0.1" (2.54mm) Locking & Polarising Header Connectors

A range of connectors for mating cables to PCBs. The connectors are polarised and locking for accurate and secure connections from 2 way to 10 way. The male PCB headers are available in both right angle and vertical orientations. Socket contacts are formed from tin plated brass that can be soldered or crimped.

- 2.54mm pin spacing
- 0.9mm PCB drill hole

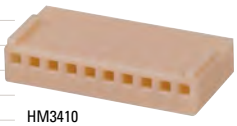
Suitable crimping tool for 0.1" header sockets is our Cat. TH1834.



Technical information	All models
Voltage	250V
Current: Brass Crimp/ Tin plated	2.5A max. (solderable)
Contact Resistance	20mΩ max
Dielectric Withstanding Voltage	1500VAC
Insulation Resistance	50MΩ
Contact Insertion Force	681g
Contact Retention to Housing	3.63kg
Mating Force	199g max
Normal Force	200g min
Housing	UL 94v-0 White nylon
Temperature	0 to +75°C

0.1" HEADER SOCKETS, LOCKING & POLARISED

Pins	Cat.	Qty 1+	Qty 4+	Qty 10+
2	HM3402	$0.65	$0.58	$0.52
3	HM3403	$0.70	$0.63	$0.56
4	HM3404	$0.85	$0.76	$0.68
6	HM3406	$0.95	$0.85	$0.76
8	HM3408	$1.20	$1.05	$0.95
10	HM3410	$1.40	$1.25	$1.10


HM3410

0.1" PIN PCB PLUG (STRAIGHT ENTRY, LOCKING & POLARISED)

Pins	Cat.	Qty 1+	Qty 4+	Qty 10+
2	HM3412	$0.30	$0.27	$0.24
3	HM3413	$0.40	$0.36	$0.32
4	HM3414	$0.50	$0.45	$0.40
6	HM3416	$0.75	$0.67	$0.60
8	HM3418	$0.95	$0.85	$0.76
10	HM3420	$1.15	$1.00	$0.90

HM3420

0.1" PIN PCB PLUG (RIGHT ANGLE ENTRY, LOCKING & POLARISED)

Pins	Cat.	Qty 1+	Qty 4+	Qty 10+
2	HM3422	$0.30	$0.27	$0.24
3	HM3423	$0.40	$0.36	$0.32
4	HM3424	$0.50	$0.45	$0.40
6	HM3426	$0.75	$0.67	$0.60
8	HM3428	$0.95	$0.85	$0.76
10	HM3430	$1.15	$1.00	$0.90

HM3422

0.156" (4mm) Header Sockets, Locking & Polarised

(Includes crimp Pins)

HM3432

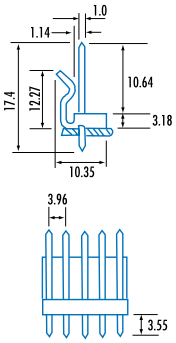
p.A38
crimper to suit TH1834

Pins	Cat.	Qty 1+	Qty 4+	Qty 10+
2	HM3432	$0.90	$0.81	$0.72
3	HM3433	$1.00	$0.90	$0.80
4	HM3434	$1.15	$1.00	$0.90
6	HM3436	$1.45	$1.30	$1.15
8	HM3438	$1.55	$1.35	$1.20
10	HM3440	$1.65	$1.45	$1.30

0.156" (4mm) Locking & Polarising Header Connectors

The contacts are rated at 250V @ 7A AC/DC which makes them an ideal power connector to a PCB. They are end to end stackable and commonly seen as the output connector on Switchmode power supplies.

Technical information	All models
Voltage	250V
Current	7.0A
Contact Resistance	20mΩ max
Dielectric Withstanding Voltage	1500V
Insulation Resistance	500kΩ min
Contact Insertion Force	0.681kg
Contact Retention to Housing	3.63kg
Wire Pull-Out force	2.85kg
Mating Force	0.199kg
Unmating Force	150g
Durability	25 cycles
Housing	Nylon UL 94V-2
Temperature	-40°C to 105°C



0.156" (4mm) Locking & Polarised, Straight Entry Pin PCB Plug

(To match previous headers)

Pins	Cat.	Qty 1+	Qty 4+	Qty 10+
2	HM3442	$0.45	$0.40	$0.36
3	HM3443	$0.55	$0.49	$0.44
4	HM3444	$0.65	$0.58	$0.52
6	HM3446	$0.80	$0.72	$0.64
8	HM3448	$0.95	$0.85	$0.76
10	HM3450	$1.15	$1.00	$0.90

HM3450

DISK DRIVE CONNECTORS

Disk Drive Power Connector - Plug

Plug for wiring power to any standard drive. Has crimp pins.

PP0743

Disk Drive PCB Power Plug

Power Plug to PC drives.

PP0744

Disk Drive Power Socket

Socket for wiring power cables for use on any standard drive. Has crimp pins.

PS0742

Disk Drive IDC Power Socket

- Insulation displacement type

PS0740

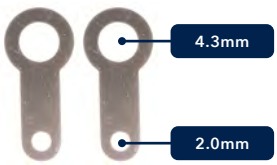
Type	Cat.	Qty 1+	Qty 10+	Qty 50+
Power Plug	PP0743	$1.95	$1.75	$1.55
PCB Power Plug	PP0744	$1.45	$1.30	$1.15
Power Socket	PS0742	$2.95	$2.60	$2.30
IDC Power Socket	PS0740	$3.95	$3.45	$3.15

SOLDER LUGS & TAGSTRIPS

Solder Lugs

Plain solder lugs for terminating wires onto bolts or under screws.

- Length: 17.6mm
- ID#1: 4.3mm
- ID#2: 2.0mm
- Tin plated
- 10A rated



Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
50	HP1350	$5.95	$5.35	$4.75

Tagstrips

- Tin plated lugs

Staked to phenolic

HM3302

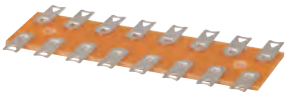
Type	Cat.	Qty 1+	Qty 4+	Qty 10+
2 Way	HM3302	$0.95	$0.85	$0.76
3 Way	HM3303	$1.15	$1.00	$0.90
4 Way	HM3304	$1.35	$1.20	$1.05
5 Way	HM3305	$1.60	$1.40	$1.25
8 Way	HM3308	$1.95	$1.75	$1.55

SOLDER LUGS & TAGSTRIPS CONTINUED

Tagboard

2 tagboards per pack with 8 tin plated lugs per side.

- Dimensions: 80(L) x 32(W)mm (Including lugs)



Staked to phenolic

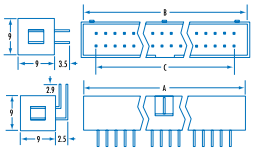
Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
2	HM3320	$4.50	$4.05	$3.60

IDC PLUGS, SOCKETS & PINS

IDC Headers

All headers have gold plated pins.

Vertical



PP1114

Pins	A	B	C	Cat.	Qty 1+	Qty 4+	Qty 10+
10	20	18	10	PP1100	$0.85	$0.76	$0.68
16	28	26	18	PP1106	$1.10	$0.95	$0.85
26	41	38.5	30.5	PP1110	$1.45	$1.30	$1.15
34	51	49.5	41	PP1112	$1.75	$1.55	$1.40
40	58.5	56	48	PP1114	$1.95	$1.75	$1.55

Right Angle

PP1132

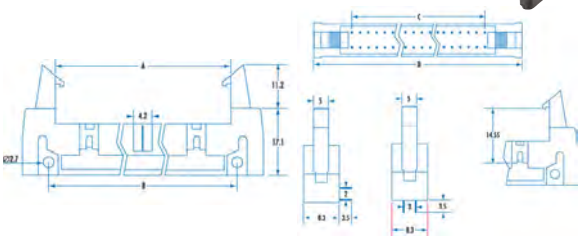
Pins	A	B	C	Cat.	Qty 1+	Qty 4+	Qty 10+
10	20	18	10	PP1118	$0.95	$0.85	$0.76
16	28	26	18	PP1122	$1.20	$1.05	$0.95
26	41	38.5	30.5	PP1126	$1.55	$1.35	$1.20
34	51	49.5	41	PP1128	$1.85	$1.65	$1.45
50	71	69	61	PP1132	$3.45	$3.10	$2.75

IDC Locking Headers

All headers have gold plated pins.

Vertical

PP1138



Pins	A	B	C	D	Cat.	Qty 1+	Qty 4+	Qty 10+
10	32	10	22	18	PP1134	$1.15	$1.00	$0.90
16	39.5	18	29.5	25.5	PP1138	$1.45	$1.30	$1.15
20	45	23	34.5	31	PP1140	$1.75	$1.55	$1.40
26	52	30.5	42	38	PP1142	$2.25	$1.95	$1.80
50	83	61	73	69	PP1148	$3.75	$3.30	$2.95

Right Angle

PP1150

Pins	A	B	C	D	Cat.	Qty 1+	Qty 4+	Qty 10+
10	32	10	22	18	PP1150	$1.45	$1.30	$1.15
16	39.5	18	29.5	25.5	PP1154	$1.75	$1.55	$1.40

IDC Line Sockets

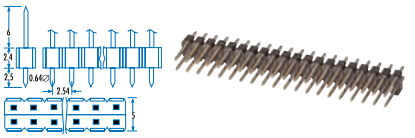
- Insulation displacement connection
- Suits standard pitch ribbon cable
- 3A rated

p.A230 IDC cable to suit

Pins	Current	Cat.	Qty 1+	Qty 10+	Qty 50+
10	3A	PS0984	$1.75	$1.55	$1.40
16	3A	PS0985	$1.95	$1.75	$1.55
20	3A	PS0986	$2.10	$1.85	$1.65
26	3A	PS0987	$2.40	$2.15	$1.90
34	3A	PS0988	$2.85	$2.55	$2.25
40	3A	PS0989	$3.15	$2.80	$2.50
50	3A	PS0990	$3.65	$3.25	$2.90

Dual In-Line Jumpers

- 40 way (2 x 20)
- Snap apart
- 3A rated

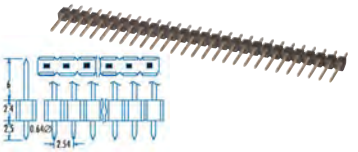


Pins	Current	Cat.	Qty 1+	Qty 4+	Qty 10+
40	3A	HM3250	$1.50	$1.35	$1.20

Header Terminal Strips 28 & 40 Pin

VERTICAL LAUNCHER - 0.1"/ 2.54mm Pitch For PCBs and PCB mass terminals. Snap apart if you need a small length

- 3A rated



Pins	Current	Cat.	Qty 1+	Qty 4+	Qty 10+
28	3A	HM3211	$0.95	$0.85	$0.76
40	3A	HM3212	$1.10	$0.95	$0.85

40 Pin Female Header Strip

Just like the headers on the Duinotech main boards & a great match for the HM3212 40 pin male header strip. Trimming may be needed to use shorter lengths.

- 3A rated

Pins	Current	Cat.	Qty 1+	Qty 4+	Qty 10+
40	3A	HM3230	$2.50	$2.25	$2.00

2 Way Crimp Plug - 2.54mm - Pkt 10

2 way plug commonly used on cordless phone batteries and RC toy Li-Po batteries.

- Ratings: Current 3A / Voltage 250V AC/DC
- Pitch: 2.54mm
- Temperature Rating: -25°C to +85°C
- Suitable wire size: 30-22AWG (0.25mm to 0.4mm)

Type	Pack	Cat.	Qty 1+	Qty 10+	Qty 50+
Crimp Plugs	10	PT4453	$2.95	$2.65	$2.35

Jumper Shunts

- 2.54mm spacing
- Pack of 10
- 3A rated

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
10	HM3240	$1.95	$1.75	$1.55

PCB Pins & Sockets

1.0mm pins and sockets for easy termination of wire on PCB boards.

- Gold flashed
- 5A rated

HP1250

HP1260

Type	PACK	Cat.	Qty 1+	Qty 4+	Qty 10+
Pins	50	HP1250	$5.95	$5.35	$4.75
Sockets	25	HP1260	$5.95	$5.35	$4.75

TERMINAL BLOCKS & CABLE CONNECTORS

TERMINAL BLOCKS & CONNECTORS

WAGO Push Wire Connectors

WAGO 273 Series PUSH WIRE® connector for use in junction boxes suitable for solid conductors. This reliable connector with PUSH WIRE® technology has proven itself as an immediate solution for use with cross-sections up to 4mm². The transparent housing enables the installer to see at a glance whether all the conductors have been fully inserted & properly connected.

HM3232

SIZE	Colour	Cat.	Qty 1+	Qty 4+	Qty 10+
2 Way 24A	Yellow	HM3231	$0.95	$0.85	$0.76
3 Way 41A	Red	HM3233	$1.95	$1.75	$1.55
4 Way 24A	Orange	HM3232	$1.35	$1.20	$1.05

WAGO Splice Terminal Blocks

Connect different types of conductors and bridge large differences in cross section with ease! In practical use, this connector can be used for intercom wiring, or to hook-up of an electric stove - fast. 10A rated.

HM3235

Type	Current	Cat.	Qty 1+	Qty 4+	Qty 10+
2 Way	10A	HM3234	$1.65	$1.45	$1.30
3 Way	10A	HM3235	$1.95	$1.75	$1.55

Carrier for Splice Terminal Blocks

An orange mounting carrier suitable for HM3234 (2 wire) & HM3235 (3 wire) compact splicing connectors.

Cat.	Qty 1+	Qty 4+	Qty 10+
HM3236	$2.95	$2.65	$2.35

"Jow" Cable Clamp Connectors

Simply insert your wire into the clamp opening and snap it shut using your hands or small pliers depending on wire gauge to make the connection. The precision-sharpened connector blades borrows the IDC configuration that cut through the wires create a connection. Available in two shapes - "I" type and "T" type. "I" type are used for end to end connections whereas the "T" type for parallel connections. Ideal for applications such as: low voltage LEDs, residential, automotive, communication and broadcasting.

- Avoid stripping, twisting or crimping cables together eliminates need to tape cables
- Creates an IP33 connection
- Electrically Safety approved
- Handles up to 600VAC
- RoHS compliant

Specifications	PT4640	PT4641
Suitable For Cable Between	27-20 (AWG) Cross section (mm2): 0.2-0.5	19-17 (AWG) Cross section (mm2): 0.75
Max Current (240VAC)	3A	10A
Connection Loss (Ohm)	0.0018	0.0010
Dimensions/Weight	25(L) x 5.5(W)x 5.5(H)mm/0.8g	30(L) x 6(W) x 6(H)mm/1g

Specifications	PT4651	PT4653
Suitable For Cable Between	19-17 (AWG), Cross section (mm2): 0.75	3-12 (AWG), Cross section (mm2): 2.5
Max Current (240VAC)	10A	20A
Connection Loss (Ohm)	0.0010	0.0001
Dimensions/Weight	30(L) x 6(W) x 6(H)mm/1.6g	37(L) x 7.7(W) x 7.7(H)mm/3.3g

Type		Current	Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
In-line	I Type	3A	6	PT4640	$8.95	$8.05	$7.15
In-line	I Type	10A	4	PT4641	$8.95	$8.05	$7.15
Parallel	T Type	10A	4	PT4651	$8.95	$8.05	$7.15
Parallel	T Type	20A	2	PT4653	$8.95	$8.05	$7.15

NYLON TERMINAL STRIPS

We have a large range of soft nylon terminal strips with improved quality.
See next page.

Ceramic Terminal Blocks

Glazed porcelain terminal blocks are ideal for high temperature situations, such as in lighting.
Ask us for competitive bulk prices.

HM3182
29(L) x22(D)x17(H)mm

HM3183
30(L) x18(D)x16(H)mm

HM3185
52(L) x29(D)x22(H)mm

Type	Current	Voltage	Cat.	Qty 1+	Qty 4+	Qty 10+
2 Wire Medium	10A	250VAC	HM3182	$1.25	$1.10	$1.00
3 Wire Small	5A	380VAC	HM3183	$1.85	$1.65	$1.45
3 Wire Large	30A	250VAC	HM3185	$2.15	$1.90	$1.70

HEADER/ TERMINAL BLOCKS - PCB MOUNT

PCB Spring Terminal Blocks

These PCB terminal blocks retain the wire securely by a spring type clamp. The wire is held very securely but can be quickly released by depressing a release lever. The wire can be inserted/released indefinitely with virtually no deterioration of the contact/spring assembly. Both 2 & 3 poles are available and the housing of each is dove tailed to stack together and make any number of poles.

- Pitch: 5.0mm
- Housing material: PA66
- Contact/spring assembly: Stainless Steel
- Will accept wires from 22-14AWG

HM3140

HM3142

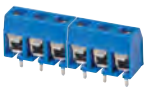
Specifications	BOTH
Current Rating	12.0A @ 300VAC
Temperature Rating	-40˚C to +105˚C
Power Rating	5kV rated / 250VAC Cat III
Dimensions	2-Way: 10(L) x 13(W) x 15(H)mm 3-Way: 15(L) x 13(W) x 15(H)mm

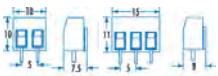
Type	Current	Cat.	Qty 1+	Qty 4+	Qty 10+
2 Way	12A	HM3140	$1.55	$1.35	$1.20
3 Way	12A	HM3142	$1.95	$1.75	$1.55

PCB Mount Screw Terminals - 5mm

Ideal for those situations where wires leave a PCB. Just solder the terminal strip to the PCB and connect wires. 2 way (HM3172) and 3 way (HM3173) are interlocking, so you can make up whatever size you require using these - see 6 way pictured.

- 8A rated
- Wire protected by compression plate
- Join together to make 6 way



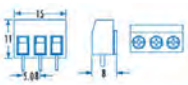


Type	Current	Cat.	Qty 1+	Qty 4+	Qty 10+
2 Way	8A	HM3172	$1.35	$1.20	$1.05
3 Way	8A	HM3173	$1.75	$1.55	$1.40

Weidmuller PCB Mount Screw Terminals - 5.08mm

These are 5.08mm spacing, come in 2 & 3 way, are interlocking & orange in colour.

- 10A rated



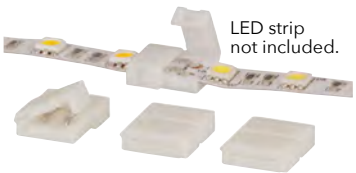
HM3132

Weidmüller
The Interface Partner

Type	Current	Cat.	Qty 1+	Qty 4+	Qty 10+
2 Way	10A	HM3130	$1.35	$1.20	$1.05
3 Way	10A	HM3132	$1.75	$1.55	$1.40

LED Strip Connectors

Handy 2 pin joiners and power leads to make installing your LED strips neater and easier. Joiners available in straight, elbow & T-shape.



LED strip not included.

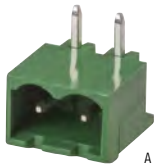
Type	Cat.	Qty 1+	Qty 5+	Qty 10+
2 Pin Straight Joiner (4 Pack)	ZD0644	$4.95	$4.45	$3.95
2 Pin Joiner Elbow (2 Pack)	ZD0646	$3.95	$3.55	$3.15
2 Pin Joiner T-Shape	ZD0648	$4.95	$4.45	$3.95
2 Pin to 2.1mm DC Socket	ZD0640	$6.95	$6.25	$5.55
2 Pin to Bare Leads	ZD0642	$2.95	$2.65	$2.35

HEADERS / TERMINAL BLOCKS - PCB MOUNT CONTINUED

5.08mm High Quality Plugable Terminal Blocks/Headers

Available in both horizontal-plug and vertical-plug versions, these quality headers simply solder to a PC board and are for the Plugable Terminal Blocks (see below).

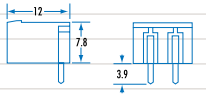
- Made from Polyamide66 plastic (UL94V-0)
- 1.0mm tin-plated brass solder pins
- Excellent current and insulation characteristics


A

B

C

Specifications	ALL MODELS
Current Rating	12.0A @ 300VAC
Insulation Withstands Volt	2000VAC min
Insulation Resistance	>5000MΩ 500VDC
Pcb Hole Diameter	1.5mm
Pitch	5.08mm (0.200 inch)



The plug version to suit the above headers - these terminal blocks are easily plugged in, and feature nickel-plated brass cage clamps, tin-plated phosphor bronze contacts, M3 nickel-plated steel screws.

Horizontal PC Mount (Pic A)

Poles	Cat.	Qty 1+	Qty 4+	Qty 10+
2	HM3102	$1.15	$1.00	$0.90
3	HM3103	$1.85	$1.65	$1.45
4	HM3104	$2.15	$1.90	$1.70
6	HM3106	$2.75	$2.45	$2.20
8	HM3108	$3.50	$3.15	$2.80

Vertical PM Mount Plugable Headers (Pic B)

Poles	Cat.	Qty 1+	Qty 4+	Qty 10+
2	HM3112	$1.15	$1.00	$0.90
3	HM3113	$1.85	$1.65	$1.45
4	HM3114	$2.15	$1.90	$1.70
6	HM3116	$2.75	$2.45	$2.20
8	HM3118	$3.50	$3.15	$2.80

Screw Terminal Sockets (Pic C)

Poles	Cat.	Qty 1+	Qty 4+	Qty 10+
2	HM3122	$2.65	$2.35	$2.10
3	HM3123	$3.75	$3.35	$3.00
4	HM3124	$4.95	$4.45	$3.90
6	HM3126	$6.95	$6.25	$5.50
8	HM3128	$8.95	$8.05	$7.15

TERMINAL BARRIERS

Surface Mount Screw Terminal Strips

These units feature the ability to terminate 2 or 3 sets of wires securely with the option of changing or adding connections. In classic barrier strip fashion there is a comprehensive fence between each terminal. Each sturdy block has 2 x 4mm mounting holes at each end and an insulating body with high impact plastic.
Two models available.

- 25A rated

HM3169

Type	Current	Cat.	Qty 1+	Qty 4+	Qty 10+
2 Way	25A	HM3167	$3.75	$3.35	$3.00
3 Way	25A	HM3169	$4.50	$4.05	$3.60

Plug/Socket Terminal Strip

Semi permanent connection up to 12 poles.

- Reliable screw down termination
- 10A per pole
- Supplied as a matching pair
- A great multiple auto / marine connector for low voltage
- Not for 240V

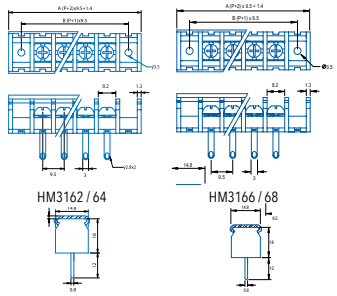
Current	Cat.	Qty 1+	Qty 4+	Qty 10+
10A	HM3202	$13.95	$12.45	$10.95

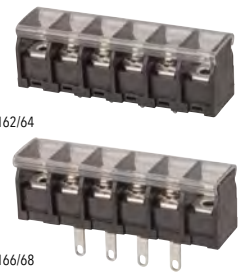
Terminal Barriers - Transparent Covers

Specifications	ALL MODELS
Pitch	9.5mm
Barrier Material	Thermoplastic (UL-94V-0), Black
Terminals	Tin Plated Brass (Standard)
Screws	Nickel Plated Steel
Wire AWG	12-22 STR
Rating	25 Amp, 300VAC
Cover Material	PC
Insulation Withstands Voltage	AC 2000V/Min
Insulation Resistance	500Mohm or more at 500V

PC Mount

Type	Current	Cat.	Qty 1+	Qty 4+	Qty 10+
4 Way	25A	HM3162	$4.95	$4.45	$3.95
6 Way	25A	HM3164	$6.95	$6.25	$5.55


HM3162 / 64
HM3166 / 68


HM3162/64
HM3166/68

Panel Mount

Type	Cat.	Qty 1+	Qty 4+	Qty 10+
4 Way	HM3166	$4.95	$4.45	$3.95
6 Way	HM3168	$6.95	$6.25	$5.55

Terminal Strips - Improved Quality

Still 12 way and capable of being divided with a sharp knife, however, the screw retention is much sturdier. Each terminal block has a mounting hole on a fixed pitch.

- Material: Polyamide 66 (nylon) / UL94V-2 flame retardant
- Temperature: -35°C to +110°C
- Voltage: 250-450V
- Colour: Natural

Current	Cable Dia.	Length	Pitch	Cat.	Qty 1+	Qty 4+	Qty 10+
6A	3.3mm	114.5mm	10mm	HM3194	$2.15	$1.90	$1.70
10A	4.2mm	128.8mm	11mm	HM3196	$2.45	$2.20	$1.95
15A	4.5mm	136.8mm	12mm	HM3200	$3.25	$2.90	$2.60

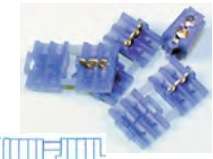
Current	Cable Dia.	Length	Pitch	Cat.	Qty 1+	Qty 4+	Qty 10+
30A	5.6mm	164.5mm	15mm	HM3198	$3.95	$3.55	$3.15
60A	6.6mm	193mm	16.3mm	HM3204	$5.95	$5.35	$4.75

CONTACT & QUICK SPLICE CONNECTORS

Contact Connectors

Simply wrap around the existing wire and new wire & squeeze. Connector cuts through insulation and makes contact without damaging the conductor.
Fully insulated once on.

- 5A rated
- 16G max
- 12-24VDC - 10A max



Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
4	HP1206	$2.45	$2.20	$1.95

Quick Splice Connectors

Simply insert your wires and squeeze it closed to connect and crimp. Quick, easy, and secure. Nylon insulation rated to 105°C

- 5A rated

A B C

ID	Type	Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
A	22-18AWG	6	PT4537	$2.75	$2.45	$2.15
B	16-14AWG	6	PT4637	$2.75	$2.45	$2.15
C	12-10AWG	6	PT4737	$2.95	$2.65	$2.35

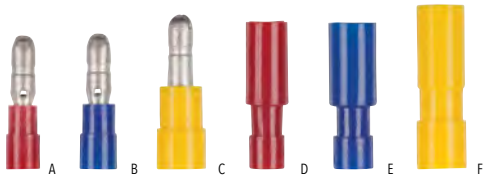
STANDARD QUICK CONNECTORS

Nylon Injection Moulding

Unlike the majority of quick crimp connectors available on the market, our range of standard quick connectors are made with a nylon injection moulded insulation as opposed to the heat shrunk vinyl insulation most others feature. The injection-moulded nylon insulation is temperature rated to 105°C, and features a moulded funnel taper in the insulation for easy cable entry.
MOST BULLET, SPADE LUG & FORK CONNECTORS CAN BE SAFELY RATED FOR 10 AMPS.

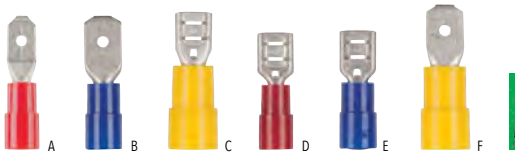
	RED	Cable Entry Size: 4.3mm Wire Size: 0.75 - 1.0mm²
	BLUE	Cable Entry Size: 4.5mm Wire Size: 1.5 - 2.5mm²
	YELLOW	Cable Entry Size: 6.6mm Wire Size: 4.0 - 6.0mm²

Bullets



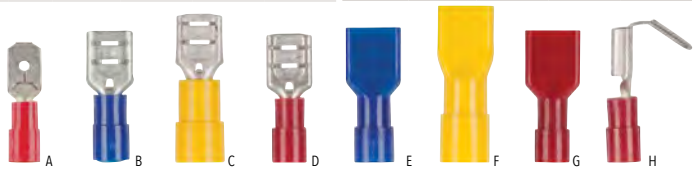
ID	Type	Size	Pkt	Cat.	Qty 1+	Qty 4+	Qty 10+	Pkt	Cat.	Qty 1+	Qty 4+	Qty 10+
A	Male	4	8	PT4500	$3.75	$3.35	$3.00	50	PT4501	$11.95	$10.45	$9.45
B	Male	4	8	PT4600	$3.50	$3.15	$2.75	100	PT4601	$17.95	$15.95	$13.95
C	Male	4	8	PT4700	$3.95	$3.55	$3.15	100	PT4701	$19.95	$17.95	$15.95
D	Female	4	8	PT4502	$3.75	$3.35	$3.00	50	PT4503	$11.95	$10.45	$9.45
E	Female	4	8	PT4602	$3.50	$3.15	$2.75	100	PT4603	$17.95	$15.95	$13.95
F	Female	4	8	PT4702	$3.95	$3.55	$3.15	100	PT4703	$19.95	$17.95	$15.95

Spades



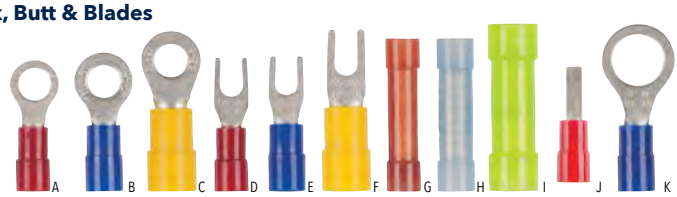
ID	Type	Size	Pkt	Cat.	Qty 1+	Qty 4+	Qty 10+	Pkt	Cat.	Qty 1+	Qty 4+	Qty 10+
A	Male	4.8	8	PT4518	$2.75	$2.45	$2.15	-	-	-	-	-
B	Male	6.3	8	PT4609	$2.75	$2.45	$2.15	100	PT4610	$14.95	$13.35	$11.70
C	Female	4.8	8	PT4722	$3.45	$3.05	$2.75	100	PT4721	$17.95	$15.95	$14.35
D	Female	4.8	8	PT4522	$2.75	$2.45	$2.15	100	PT4524	$13.95	$12.35	$10.95
E	Female	4.8	8	PT4622	$2.75	$2.45	$2.15	100	PT4621	$14.95	$13.35	$11.70
F	Male	6.4	8	PT4709	$3.45	$3.05	$2.75	100	PT4710	$17.95	$15.95	$14.35

Spades



ID	Type	Size	Pkt	Cat.	Qty 1+	Qty 4+	Qty 10+	Pkt	Cat.	Qty 1+	Qty 4+	Qty 10+
A	Male	6.4	8	PT4509	$2.75	$2.45	$2.15	100	PT4512	$13.95	$12.35	$10.95
B	Female	6.4	8	PT4607	$2.75	$2.45	$2.15	100	PT4608	$14.95	$13.45	$11.95
C	Female	6.8	8	PT4707	$3.45	$3.10	$2.75	100	PT4708	$17.95	$15.95	$13.95
D	Female	6.8	8	PT4507	$2.75	$2.45	$2.15	100	PT4513	$13.95	$12.35	$10.95
E	Female	6.4	8	PT4625	$2.75	$2.45	$2.20	50	PT4626	$9.95	$8.75	$7.75
F	Female	6.8	8	PT4725	$3.45	$3.10	$2.75	50	PT4726	$11.95	$10.45	$9.45
G	Female	6.8	8	PT4525	$2.75	$2.45	$2.15	50	PT4526	$8.95	$8.05	$7.15
H	Piggyback	6.4	8	PT4510	$2.75	$2.45	$2.15	100	PT4511	$13.95	$12.35	$10.95

Eye, Fork, Butt & Blades



ID	Type	Pkt	Cat.	Qty 1+	Qty 4+	Qty 10+	Pkt	Cat.	Qty 1+	Qty 4+	Qty 10+
A	Eye	8	PT4514	$2.75	$2.45	$2.15	100	PT4515	$13.95	$12.35	$10.95
B	Eye	8	PT4614	$2.75	$2.45	$2.15	100	PT4615	$14.95	$13.35	$11.70
C	Eye	8	PT4714	$3.45	$3.10	$2.75	100	PT4715	$19.95	$17.95	$15.95
D	Fork	8	PT4523	$2.75	$2.45	$2.15	100	PT4529	$13.95	$12.35	$10.95
E	Fork	8	PT4623	$2.75	$2.45	$2.15	100	PT4624	$14.95	$13.35	$11.70
F	Fork	8	PT4723	$3.45	$3.10	$2.75	100	PT4724	$19.95	$17.95	$15.95
G	Butt	8	PT4527	$2.75	$2.45	$2.15	100	PT4528	$13.95	$12.35	$10.95
H	Butt	8	PT4627	$2.75	$2.45	$2.15	100	PT4628	$16.95	$14.95	$13.45
I	Butt	8	PT4727	$3.45	$3.10	$2.75	100	PT4728	$23.95	$21.45	$18.95
J	Blade	8	PT4516	$2.75	$2.45	$2.15	100	PT4517	$13.95	$12.35	$10.95
K	Eye	8	PT4618	$2.75	$2.45	$2.15	8	PT4718	$3.45	$3.10	$2.75

Large Spade Quick Connectors

- Spade socket
- 9.5mm
- Pack of 4

Suits 60A horn relay SY4074

Pkt	Cat.	Qty 1+	Qty 4+	Qty 10+
4	PT4717	$3.95	$3.45	$3.15

Ferrule Crimp Connectors

- pack of 20

ID	SIZE	Cat.	Qty 1+	Qty 4+	Qty 10+
A	0.75mm²	PT4433	$2.95	$2.60	$2.30
B	1.50mm²	PT4533	$2.95	$2.60	$2.30
C	2.5mm²	PT4633	$2.95	$2.60	$2.30

Quick Connect Pack

A box of all the standard 1/4" (6.35mm) QC tabs and receptacles, but also the odd QC sizes ie: 3.3mm and 4.8mm sizes.
Total 160 pieces.

Includes the following:

- 10 x 6.4mm female crimp spade lugs wire dia 1.8mm
- 10 x 6.4mm female crimp spade lugs wire dia 3.5mm
- 10 x Close end wire crimpers - dia 2.6mm
- 10 x Close end wire crimpers - dia 3.8mm
- 5 x Contact wire connectors
- 10 x Female bullet connectors - insulated
- 10 x Male bullet connectors - insulated
- 5 x 3 way spade lug connectors 6.8mm
- 5 x spade piggyback connectors 6.8mm
- 10 x 4.9mm female spade lugs
- 10 x 8.4mm hole dia ring terminals
- 10 x 5.7mm hole dia ring terminals
- 10 x 5.3mm hole dia spade terminals
- 10 x 4.3mm hole dia spade terminals
- 5 x 3.5mm dia butt connectors
- 5 x 2.3mm dia butt connectors
- 5 x 1.8mm dia butt connectors
- 10 x 3.3mm spade connectors (tweeter connectors)
- Beware of others with less than 160 pieces

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
160 Pieces	PT4530	$22.95	$20.35	$18.35

Are you in the trade?
For professionals engaged in electronics & construction-related industries.
trade card
jaycar

CRIMP LUG & TERMINALS

SELF SEALING QUICK CONNECTORS

Spades, Eyes, Forks, Butt & Bullets

The unique heat sensitive sealing gel in these quick connectors will automatically flood the crimp joint with sealant as the heat-shrink sleeve is heated. The resulting crimp connection is water and corrosion resistant and has good strain relief properties. 11 styles to choose from.

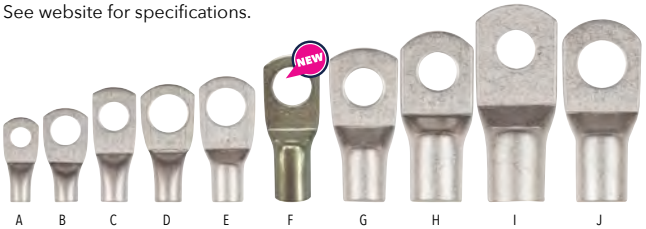
ID	Type	Size	Current (DC)	Cat.	Qty 1+	Qty 4+	Qty 10+
A	Male	4.8mm	5A	PT4818	$5.95	$5.25	$4.75
B	Female	4.8mm	5A	PT4822	$5.95	$5.25	$4.75
C	Male	6.4mm	10A	PT4809	$5.95	$5.25	$4.75
D	Female	6.4mm	10A	PT4807	$5.95	$5.25	$4.75
E	Female Ins.	6.4mm	10A	PT4825	$6.95	$6.25	$5.50
F	Piggyback	6.4mm	10A	PT4810	$6.95	$6.25	$5.50
G	Eye	5.3(ID)/8.0(OD)	5A	PT4814	$5.95	$5.25	$4.75
H	Fork	3.7(ID)/5.7(OD)	3A	PT4823	$5.95	$5.25	$4.75
I	Butt	4.7	5A	PT4827	$6.95	$6.25	$5.50
J	Male	4	5A	PT4800	$5.95	$5.25	$4.75
K	Female	4	5A	PT4802	$6.95	$6.25	$5.50

EYE TERMINALS

Non-Insulated Eye Terminals

A range of non-insulated eye terminals for a variety of electronic or automotive applications.

See website for specifications.



ID	Hole	Cable entry	PK	Current (DC)	Cat.	Qty 1+	Qty 4+	Qty 10+
A	4mm	2.5mm²	8	20A	PT4930	$2.95	$2.65	$2.35
B	6mm	4mm²	8	30A	PT4932	$2.95	$2.65	$2.35
C	6mm	6mm²	8	35A	PT4934	$3.15	$2.80	$2.50
D	8mm	6mm²	8	35A	PT4935	$3.25	$2.90	$2.60
E	8mm	10mm²	8	40A	PT4936	$4.95	$4.45	$3.95
F	8mm	15.2mm²	4	45A NEW	PT4933	$4.95	$4.46	
G	8mm	25mm²	4	50A	PT4937	$4.45	$4.00	$3.55
H	8mm	35mm²	4	60A	PT4938	$6.50	$5.85	$5.20
I	8mm	50mm²	2	100A	PT4939	$4.75	$4.25	$3.80
-	10mm	25mm²	4	50A NEW	PT4941	$5.25	$4.73	
J	10mm	35mm²	2	60A	PT4940	$4.75	$4.25	$3.80
-	10mm	50mm²	2	120A NEW	PT4942	$5.25	$4.73	

p.A38 - Crimping Tools

CABLE CONNECTORS

Crimp Wire Connectors

The easy way to connect 2 or 3 wires together. Simply insert into the connector, & squeeze with a pair of pliers. They are filled with sealant to provide moisture resistance. Accepts cable up to 1.08mm OD.

- 5A rating

Type	Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
(6 x 2 wire) & (2 x 3 wire)	8	HP1214	$4.95	$4.45	$3.90
2 Wire	50	HP1270	$12.95	$11.45	$9.95
3 Wire	50	HP1272	$17.95	$15.95	$13.95

CRIMP CONNECTORS & PACKS

Non-Insulated Spade Connectors

ID	Type	Size	PK	Current	Cat.	Qty 1+	Qty 4+	Qty 10+
A	Socket	6.3mm	10	10A	PT4630	$3.75	$3.35	$3.00
B	Plug	6.3mm	10	10A	PT4631	$3.75	$3.35	$3.00

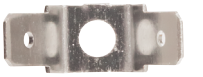
6.3mm PCB Mount PCB Spade Connectors

Commonly used to connect power to a PCB board. They work perfectly with 6.3mm female spade connectors.

- PCB tag: 6.3mm
- Current rating: 30A
- Pitch: 5mm
- Thickness: 0.81mm

Type	Size	PK	Current	Cat.	Qty 1+	Qty 4+	Qty 10+
PCB Mount	6.3mm	8	10A	PT4914	$2.65	$2.35	$2.10

6.3mm Chassis Mount Double Spade



Pack of 8 pieces of 6.3mm chassis mount double spade connectors.

- Chassis Mounting Hole: 4(Dia.)mm

Type	Size	PK	Current	Cat.	Qty 1+	Qty 4+	Qty 10+
Chassis	6.3mm	8	10A	PT4916	$2.65	$2.35	$2.10

Phone Type Crimp Lugs

Brass Spade width - 3.2mm

- Cable entry 2.5mm

Pack	Current	Cat.	Qty 1+	Qty 4+	Qty 10+
15	3A	PT4520	$2.95	$2.60	$2.30
100	3A	PT4521	$12.95	$11.35	$10.35

Phone Type Crimp Lugs

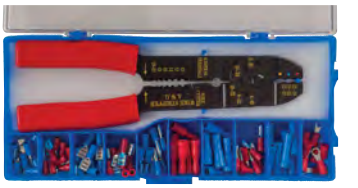
A range of non-insulated butt splice terminals similar to our non-insylated eye terminal range but designed to directly join two cable of similar diamater together.

Cable Entry	Cable Size AWG	Pack	Cat.	Qty 1+	Qty 4+
3.32mm	22-16	20	PT4960	$2.95	$2.66
4.02mm	16-14	20	PT4961	$2.95	$2.66
5.52mm	12-10	10	PT4962	$3.45	$3.11
6.20mm	8	4	PT4963	$3.45	$3.11
9.00mm	6	4	PT4964	$3.95	$3.56
11.3mm	4	2	PT4965	$3.95	$3.56
13.3mm	2	2	PT4966	$5.25	$4.73
15.0mm	1/0	2	PT4967	$5.45	$4.91

Automotive Crimp Tool with 80 Connectors

The tool will cut & strip wire, crimp connectors and also cut a range of metric bolts.

- 8 ea. male & female blue bullets
- 8 ea. male & female blue spades
- 8 x red eye connectors
- 8 ea. male & female red bullets
- 8 ea. male & female red spades
- 8 x blue butt joiners



Pack	Cat.	Qty 1+	Qty 3+	Qty 6+
80 Pieces	TH1848	$17.95	$15.95	$13.95

300 Piece QC Crimp Connector Pack

Contains 300pcs of only the most commonly-used quick connectors from our range of separately sold QC connectors. The insulation is injection-moulded Nylon rated to 105°C, with a moulded funnel taper in the insulation for easy cable entry. Beware of other QC connector packs that contain cheap vinyl connectors. Pack contains (300pcs in total):

RED - FOR 0.75 - 1.0MM CABLE

- 20 x female/20 x male bullet
- 20 x 4mm/20 x 5mm ring
- 20 x 4mm fork/ 25 x female spade
- 25 x male spade/ 10 x cable joiner

YELLOW - FOR 4-6MM CABLE

- 5 x 5mm/5 x 6mm ring 5 x cable joiner

BLUE - FOR 1.5 - 2.5MM CABLE

- 15 x female/20 x male bullet
- 20 x 4mm/10 x 6mm ring
- 25 x female/25 x male spade
- 10 x cable joiner

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
300 Pieces	PT4536	$44.95	$39.95	$35.95

GOLD PLATED LARGE-GAUGE TERMINALS

Gold Plated High Current Cable Joiners

If you have ever tried to connect, crimp or solder 8GA or even 4GA cable you will understand how convenient these gold-plated brass connectors are. Each cable termination is via gold grub screws and joiner is supplied with small transparent insulating heatshrink tube.

	Cat.	Qty 1+	Qty 4+	Qty 10+
Suit 8GA cable	HC4065	$8.25	$7.40	$6.60
Suit 4GA cable	HC4064	$8.50	$7.65	$6.80

Gold Plated Terminals

Supplied in pairs. 1 red and 1 black

8GA QC Gold Connectors - Small Eye

Specifications	PT4560
Hole Size	3.7mm
Cable Hole Dia	4.8mm
Size Including Cover	35mm
Metal Thickness	1mm

AMP-KING

Sold as a Pair	Cat.	Qty 1+	Qty 4+	Qty 10+
1 x Red & 1 x Black	PT4560	$2.95	$2.65	$2.35

8GA QC Gold Connectors - Large Eye

Suits thinner cable (8GA):

Specifications	PT4562
Hole Size	8.4mm
Cable Hole Dia	4.8mm
Size Including Cover	42mm

AMP-KING

Sold as a Pair	Cat.	Qty 1+	Qty 4+	Qty 10+
1 x Red & 1 x Black	PT4562	$3.25	$2.90	$2.60

4GA QC Gold Connectors - Large Eye

Suits Large Cable (4GA)

Specifications	PT4564
Hole Size	8.4mm
Cable Hole Dia	8mm
Size Including Cover	50mm
Metal Thickness	1.5mm

AMP-KING

Sold as a Pair	Cat.	Qty 1+	Qty 4+	Qty 10+
1 x Red & 1 x Black	PT4564	$4.25	$3.80	$3.40

2GA QC Gold Connectors - Eye

Suits 2GA cable.

Specifications	PT4565
Eye Hole Size	12.7mm
Cable Hole Dia.	9.6mm
Size Including Cover	60mm
Metal Thickness	1.5mm

AMP-KING

Sold as a Pair	Cat.	Qty 1+	Qty 4+	Qty 10+
1 x Red & 1 x Black	PT4565	$6.25	$5.60	$5.00

0GA QC Gold Connectors - Eye

Suits thick cable (0GA)

Specifications	PT4567
Hole Size	8.4mm
Cable Hole Dia	11.8mm
Size Including Cover	60mm
Metal Thickness	1.6mm

AMP-KING

Sold as a Pair	Cat.	Qty 1+	Qty 4+	Qty 10+
1 x Red & 1 x Black	PT4567	$7.25	$6.50	$5.80

8GA QC Gold Connectors - Forked Spade Terminals

Suits thinner cable (8GA)

Specifications	PT4566
Hole Size	3.7mm
Cable Hole Dia	4.8mm
Size Including Cover	33mm

AMP-KING

Sold as a Pair	Cat.	Qty 1+	Qty 4+	Qty 10+
1 x Red & 1 x Black	PT4566	$3.25	$2.90	$2.60

8GA QC Connectors - Spades

Standard quick connect lugs that fit speaker terminals etc.

- Cable hole diameter - 3.6mm

AMP-KING

Sold as a Pair	Cat.	Qty 1+	Qty 4+	Qty 10+
1 x Red & 1 x Black	PT4568	$2.95	$2.65	$2.35

BUS BARS

8 Way 100A Machined Brass Bus Bar

These are usually used to give an electrically common point for earth wiring but are also useful for low voltage tie points, especially on boats or RV's, Caravans etc., 6 holes accept up to a 4.5mm wire bundle and the outer 2 a 6.0 bundle. The Bus bar has insulated standoffs at each end which can be removed so that the assembly can be screwed directly to a chassis. The standoffs have a conservative insulation rating of 1000V.

Do not use either SZ2003 or SZ2012 for 240V

- All screws M4.0 Brass bar 9.0 x 6.0
- Length overall including standoffs: 100mm, without standoffs: 65mm

	Cat.	Qty 1+	Qty 4+	Qty 10+
	SZ2003	$6.95	$6.25	$5.50

10 Way 150A Insulated Bus Bar

This quality bus bar features a raised insulating base that isolates the bus bar from earthed or other live chassis. It features 2 x 5mm bolted terminals for connecting main power feeds, and 10 screw terminals for connecting lower current feeds of up to 10A each. Total current capacity is 150A, and is suitable for 12-32V wiring. 2 countersunk screw holes for 5mm metric fasteners.

- Not suitable for 240V active circuit
- Dimensions: 145(L) x 30(W) x 40(H)mm

Do not use either SZ2003 or SZ2012 for 240V

	Cat.	Qty 1+	Qty 4+	Qty 10+
	SZ2012	$18.95	$16.95	$14.95

GOLD POWER DISTRIBUTION BLOCKS

100A Gold Power Distribution Block

This block will accept one 4GA wire in, and distribute to four 8GA out.

- Size includes mounting bracket

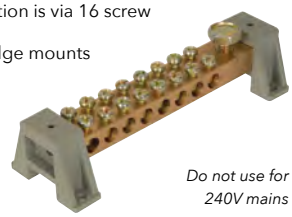
AMP-KING

	Cat.	Qty 1+	Qty 4+	Qty 10+
63(L) x 50(W) x 12(H)mm	HC4020	$12.95	$11.35	$10.35

16 Way 100A Brass Distribution Bar

An ideal way to distribute high current paths. An 8mm stud provides for incoming cable and distribution is via 16 screw terminals with 7mm cable entry holes.

- Solid brass with high quality plastic bridge mounts
- Rated for 100A per circuit
- Up to 300A total circuit capability



Do not use for 240V mains

AMP-KING

	Cat.	Qty 1+	Qty 4+	Qty 10+
112(L) x 18(W) x 12(H)mm	SZ2004	$9.95	$8.75	$7.75

ANDERSON® TYPE CONNECTORS

Anderson® 50A High Current Connectors

Used widely in both domestic and industry, you'll find this connector in many 4WD applications, boating, automotive and other industries. Supplied as a moulded 2 pole with contacts.

Specifications	PT4425	PT4427	PT4420
Contact Rating	50A		
Contact Wire Size	8 AWG	12-10 AWG	13.3mm² (6 AWG)
Voltage Rating	600V (AC or DC)		
Max Wire Insulation Diameter	11mm		
Contact Retention Force	22kg		

See our new high current connectors on page B23

Cable AWG	Current	Cat.	Qty 1+	Qty 10+	Qty 50+
8	50A	PT4425	$9.95	$8.95	$7.95
12-10	50A	PT4427	$9.95	$8.95	$7.95
6	50A	PT4420	$9.95	$8.75	$7.75

120/175AMP Versions of above

The ultimate in high current connectors as used in electric forklift trucks, electric welders and high current auto/marine use.

Specifications	PT4422	PT4424
Contact Rating	120A	175A
Contact Wire Size	33.6mm² (#2 AWG)	53.5mm² (#1/0 AWG)
Voltage Rating	600V (AC or DC)	600V (AC or DC)
Max Wire Insulation Diameter	14.6mm	19mm
Contact Retention Force	45.5kg (100lb)	137kg (300lb)

Cable AWG	Current	Cat.	Qty 1+	Qty 10+	Qty 50+
2	120A	PT4422	$19.95	$17.70	$15.70
1/0	175A	PT4424	$29.95	$26.90	$23.70

p.A256 - Full Range of Anderson® Connectors

SOLAR PV CONNECTORS

Waterproof Solar Power "PV" Connectors

When matched with our solar power cables WH3122, you can leave your cabling out in the open with the knowledge that you will never have a bad connection or an oxidised power cable.

Suitable crimping tools: TH1834/TH2000

- Pin dimension 4mm
- Tin plated copper contacts
- Contact resistance <5mΩ
- -40°C to +90°C
- IP67 rated
- Housing material PPO

TUV CERTIFIED

PS5100

PP5102

Specifications	BOTH
Rated Voltage	1000VDC
Rated Current	30A at 70°C. 25A at 85°C
Contact Resistance	<5 milliohms
TUV Certification	2 PfG 1161/01.06

Size	Cat.	Qty 1+	Qty 10+	Qty 50+
Female Inline	PS5100	$7.95	$7.15	$6.35
Male Inline	PP5102	$7.95	$7.15	$6.35

MC4 Self Locking Branch Connectors

A MMF and FFM pair of locking branch connectors for solar installations. Allows parallel connection of solar panels.

- 1 MMF and 1 FFM cable connectors
- IP rated, long lasting UL certified
- Corrosion-resistant connectors

Specifications	PT4590
Rated Current	25A
Pin Dimensions	ø4.0mm
Contact	Copper, Tin Plated
Degree of Protection	IP6, UL Certified
Dimensions	42(W) x 20(H) x 110(D)mm (each)

	Cat.	Qty 1+	Qty 5+	Qty 10+
Pair	PT4590	$21.95	$19.45	$17.45

CIGARETTE LIGHTER PLUGS & SOCKETS

Cigarette Lighter Plug

Simply plugs into the car cigarette lighter socket to obtain 12VDC from the car battery.

	Cat.	Qty 1+	Qty 10+	Qty 50+
Economy	PP2000	$1.95	$1.75	$1.55

5 Amp Lead with Bare Ends

Lead with a 5 amp fused cigarette lighter plug on one end.

- Cable length: 450mm approx
- Cable thickness: 18AWG

	Cat.	Qty 1+	Qty 3+	Qty 6+
5A	PP1995	$2.95	$2.60	$2.30

Cigarette Lighter Plug - Fused

As PP2000 but with the added safety benefit of being fused. Supplied with 3A fuse.

- Recommended

	Cat.	Qty 1+	Qty 10+	Qty 50+
3A	PP2001	$4.95	$4.45	$3.95

8 Amp Lead with Bare Ends

A lead consisting of an 8 amp fused cigarette lighter plug and 5 metres of thick cable.

- 18 AWG cable

	Cat.	Qty 1+	Qty 3+	Qty 6+
8A	PP1998	$16.95	$14.95	$13.45

CIG. LIGHTER SOCKET WIRING

Auto cigarette lighter wiring rarely allows more than 15A to be taken from this circuit.

Cigarette Lighter Inline Socket

- 5A max

	Cat.	Qty 1+	Qty 10+	Qty 50+
	PS2003	$3.95	$3.45	$3.15

Cigarette Lighter Chassis Socket

- Install in dash
- 21mm hole required

	Cat.	Qty 1+	Qty 10+	Qty 50+
	PS2002	$6.95	$6.25	$5.55

Dash/Panel Mount Cigarette Lighter Socket with Cap, 15A

Provides a cap protected cigarette lighter socket for your boat, car, or truck. Easy to install includes 2 x countersunk screw holes for easy mounting. Rated at 15A with 6.3mm spade connections

- Dimensions: 56(W) x 31(H) x 50(D)mm

	Cat.	Qty 1+	Qty 10+	Qty 50+
	PS2004	$9.95	$8.75	$7.75

15A Cigarette Socket to 8mm Eye Terminal

A handy lead allowing you to power your 12VDC cigarette lighter plug devices from a range of 12VDC sources. The cigarette lighter socket is attached to 16AWG 400mm long red and black lead with 8mm eye terminals on each end.

- Rated to 15A max

	Cat.	Qty 1+	Qty 10+	Qty 50+
	PT4451	$14.95	$13.45	$11.95

AUTOMOTIVE CONNECTORS

Waterproof Deutsch Connector Sets

High quality Waterproof 2-way "Deutsch" connectors commonly used in automotive or marine applications. Perfect for connecting up sensors/lights in the engine bay due to their superior corrosion protection and waterproof properties.

- Supplied as a male & female connector set with housings, wedges, seals and crimp pins
- Rated to 13A current

1 YEAR WARRANTY

	Cat.	Qty 1+	Qty 10+	Qty 50+
2 Way	PP2150	$7.95	$7.15	$6.35
4 Way	PP2149	$9.95	$8.95	$7.95
6 Way	PP2148	$11.95	$10.45	$9.45

Automotive Waterproof Plug & Socket Sets

Waterproof automotive connectors commonly used on many modern cars for wiring connections within the engine bay and other areas that are exposed to moisture. The interlocking parts are surrounded by a rubber seal, while an individual grommet seals each wire. Each package includes plug, socket, cable grommets and crimp pins.

- Current rating: 20A (max.)
- Pin spacing: 7.5mm
- Assembled Length: 70mm

	Cat.	Qty 1+	Qty 10+	Qty 50+
2 Way	PP2110	$8.95	$8.05	$7.15
3 Way	PP2112	$11.95	$10.45	$9.45
4 Way	PP2114	$17.95	$15.95	$13.95
6 Way	PP2116	$19.95	$17.70	$15.70

Automotive Multi-Way Plug / Sockets - 250 Series

Commonly used in automotive applications such as stereo and CB installations, or for replacements in existing wiring. The housings interlock and they come in 2, 3, 4, 6 or 8 way sets. Each comes with plug, socket, and male and female locking spade lugs.

2 way & 6 way shown

	Cat.	Qty 1+	Qty 10+	Qty 50+
2 Way	PP2062	$3.75	$3.35	$3.00
3 Way	PP2064	$4.25	$3.80	$3.40
4 Way	PP2066	$4.75	$4.25	$3.80
6 Way	PP2068	$5.50	$4.95	$4.40
8 Way	PP2069	$7.50	$6.75	$6.00

2 Pin 32 Volt Plugs & Sockets

For low voltage applications such as caravans etc up to 15 amps.

- Frankly, they are a bit clunky, but they are reliable and simple to use

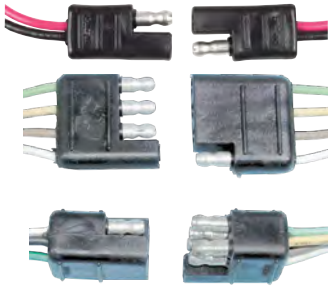
PS2073 PS2074 PP2075

	Cat.	Qty 1+	Qty 10+	Qty 50+
Line Socket	PS2073	$19.95	$17.95	$15.95
Surface Socket	PS2074	$19.95	$17.95	$15.95
Line Plug	PP2075	$9.95	$8.95	$7.95

Wired Multi Pin Plugs / Sockets

Heavy duty plug and socket with bullet type connectors.

- Pre wired with 18AWG wire
- Extremely handy when cables need to be periodically unplugged
- Bullet style connectors



	Cat.	Qty 1+	Qty 10+	Qty 50+
2 Way	PP2034	$4.25	$3.80	$3.40
4 Way	PP2030	$9.95	$8.95	$7.95
6 Way	PP2032	$12.95	$11.45	$9.95

Miniature Nylon MOLEX-Type Connectors

Suitable for high current/high density, wire-to-wire or wire-to-board applications. They are suitable for both power and signal connections.

- Fully isolated terminals
- Positive housing locks
- Four point of contact for reliability
- Low engagement force terminals
- Male and female pins supplied
- Wire size: 24-18AWG
- Current rating: 5A
- Voltage rating: 250VAC/350VAC

	Cat.	Qty 1+	Qty 10+	Qty 50+
2 Pin	PP2021	$3.25	$2.90	$2.60
3 Pin	PP2023	$3.50	$3.15	$2.80
4 Pin	PP2027	$3.95	$3.55	$3.15
6 Pin	PP2025	$4.75	$4.25	$3.80

Multi Pin Plug / Socket

Each set consists of nylon body for male/female, along with male/female socket pins to fill all available poles. Will mate with standard MOLEX-type connectors.

- Wire size: 24-14AWG, 0.2 to 2.0mm
- Current rating: 15A AC/DC max
- Voltage rating: 300VAC/DC

ALSO KNOWN AS SOFT SHELL CONNECTORS

	Cat.	Qty 1+	Qty 10+	Qty 50+
2 Pole	PP2020	$3.25	$2.90	$2.60
3 Pole	PP2022	$3.50	$3.15	$2.80
6 Pole	PP2024	$4.75	$4.25	$3.80
12 Pole	PP2026	$7.95	$7.15	$6.35

Pin Extraction Tool

Take the frustration out of removing Molex connector pins with these time save tools. Simply slide the tool over the connector and push the plunger to effortlessly remove the pin. Both male and female pin extractors available.

TH1730

TH1732

	Cat.	Qty 1+	Qty 3+	Qty 6+
Male Extractor	TH1730	$24.95	$22.45	$19.95
Female Extractor	TH1732	$24.95	$22.45	$19.95

Automatic Accounts

For Schools, Colleges, Universities, Government Departments, Radio & TV Stations - we'll open a 30-day account for you automatically. Just fill in the account form or apply online.

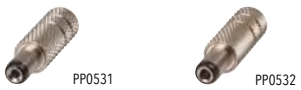
DC PLUGS, SOCKETS & ADAPTORS

Line Plugs
Line - Female Plastic

9.5mm Shaft Length	Current (DC)	Cat.	Qty 1+	Qty 10+	Qty 50+
0.7(ID) x 2.5(OD)mm	1.0A	PP0503	$2.25	$2.00	$1.80
1.0(ID) x 3.8(OD)mm	1.5A	PP0504	$2.25	$2.00	$1.80
1.3(ID) x 3.5(OD)mm	1.8A	PP0506	$2.25	$2.00	$1.80
1.6(ID) x 5.2(OD)mm	2.0A	PP0508	$2.25	$2.00	$1.80
1.7(ID) x 4.0(OD)mm	2.5A	PP0507	$2.25	$2.00	$1.80
1.7(ID) x 4.75(OD)mm	2.5A	PP0505	$2.25	$2.00	$1.80
2.1(ID) x 5.5(OD)mm	3.0A	PP0510	$2.25	$2.00	$1.80
10mm Shaft Length		**Cat.**	**Qty 1+**	**Qty 10+**	**Qty 50+**
2.5(ID) x 5.5(OD)mm	5.0A	PP0511	$2.25	$2.00	$1.80
3.1(ID) x 6.3(OD)mm	6.0A	PP0513	$2.25	$2.00	$1.80
14mm Shaft Length		**Cat.**	**Qty 1+**	**Qty 10+**	**Qty 50+**
2.1(ID) x 5.5(OD)mm	3.0A	PP0509	$2.25	$2.00	$1.80
2.5(ID) x 5.5(OD)mm	5.0A	PP0512	$2.25	$2.00	$1.80
Right Angle 9.5mm Shaft Length		**Cat.**	**Qty 1+**	**Qty 10+**	**Qty 50+**
2.1(ID) x 5.5(OD)mm	3.1A	PP0514	$2.95	$2.65	$2.35
Right Angle 14mm Shaft Length		**Cat.**	**Qty 1+**	**Qty 10+**	**Qty 50+**
2.5(ID) x 5.5(OD)mm	5.0A	PP0515	$2.95	$2.65	$2.35

Line - Female Metal Body

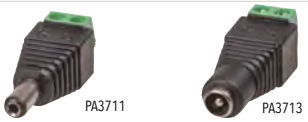
- 9.5mm shaft



Type	Current (DC)	Cat.	Qty 1+	Qty 10+	Qty 50+
2.1(ID) x 5.5(OD)mm	3A	PP0531	$4.50	$4.05	$3.60
2.5(ID) x 5.5(OD)mm	5A	PP0532	$4.50	$4.05	$3.60

2.1mm DC Connectors

- 3.0A rated



Type	Current (DC)	Cat.	Qty 1+	Qty 10+	Qty 50+
Plug - Screw Terminals	3A	PA3711	$4.95	$4.45	$4.00
Socket - Screw Terminals	3A	PA3713	$4.95	$4.45	$4.00

Illuminated Polarity Sensing DC Connector

These detect and indicate the polarity of your power connections with integrated LEDs. The LED lights up blue for centre positive, red for centre negative or purple for AC voltage. They also shine brighter as voltage increases.

- 5-30 VAC/VDC range - 3A rated
- 1 metre lead length

Type	Current (DC)	Cat.	Qty 1+	Qty 2+	Qty 4+
Inline Plug	3A	WQ7288	$7.95	$7.15	$6.75

Waterproof 2.1mm DC Connectors with Pigtail Leads

The same connector set fitted to our waterproof LED strip lights with standard 2.1(ID) x 5.5(OD)mm
DC connection with an IP67 rated coupling.
Supplied pre-fitted to a 100mm pigtail lead, allowing you to make up your own lead sets.

- Cables are 20AWG
- 3A max at 12VDC

Type	Current (DC)	Cat.	Qty 1+	Qty 10+	Qty 50+
Waterproof	3A	PS0785	$7.95	$7.15	$6.25

Line Sockets
Line - Male

Plastic body

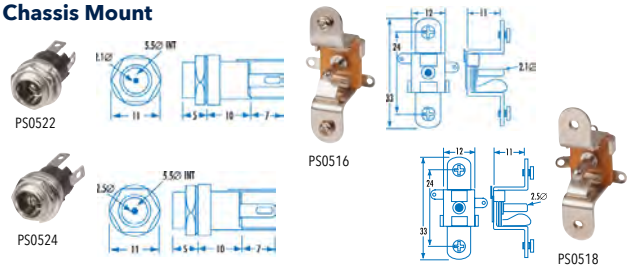
Type	Current (DC)	Cat.	Qty 1+	Qty 10+	Qty 50+
2.1mm	3.0A	PS0526	$3.95	$3.55	$3.15
2.5mm	5.0A	PS0528	$3.95	$3.55	$3.15
1.00mm - Suits Nokia	500mA	PS0540	$2.45	$2.15	$1.95

Line Sockets
Line - Male

Metal body

Type	Current (DC)	Cat.	Qty 1+	Qty 10+	Qty 50+
2.1mm	3.0A	PS0534	$4.95	$4.45	$3.95
2.5mm	5.0A	PS0536	$4.95	$4.45	$3.95

Chassis Mount



Type	Current (DC)	Cat.	Qty 1+	Qty 10+	Qty 50+
2.1mm Bulkhead	3.0A	PS0522	$2.95	$2.65	$2.35
2.5mm Bulkhead	5.0A	PS0524	$2.95	$2.65	$2.35
2.1mm Chassis	3.0A	PS0516	$1.95	$1.75	$1.55
2.5mm Chassis	5.0A	PS0518	$1.95	$1.75	$1.55

Surface Mount Male DC Power Connectors

SPST contacts

Type	Current (DC)	Cat.	Qty 1+	Qty 10+	Qty 50+
2.1mm	3.0A	PS0519	$1.95	$1.75	$1.55
2.5mm	5.0A	PS0520	$1.95	$1.75	$1.55

0.7mm PCB Mount DC Socket with SPST Slide Switch

- Snap-in, PCB mounted 0.7mm DC power socket
- SPST black On/Off slide switch
- Electrical rating: 2A @ 15VDC
- Contact resistance: <30m ohm (max)
- Insulation resistance: 100M ohm (min)
- Electrical life: 30,000 cycles
- Dimensions: 15(L) x 10(W) x 14.6(D)mm

Type	Current (DC)	Cat.	Qty 1+	Qty 10+	Qty 50+
0.7mm PCB	2A	PS0532	$3.95	$3.55	$3.15

DC Power Adaptors

	Current (DC)	Cat.	Qty 1+	Qty 10+	Qty 50+
1.3mm Plug to 2.5mm Socket	1A	PA3700	$3.95	$3.55	$3.15
1.3mm Plug to 2.1mm Socket	1A	PA3702	$3.95	$3.55	$3.15
2.1mm Plug to 2.5mm Socket	1A	PA3704	$3.95	$3.55	$3.15
2.5mm Plug to 2.1mm Socket	1A	PA3706	$3.95	$3.55	$3.15
2.1mm Plug to 2.1mm Socket	3A	PA3701	$3.95	$3.55	$3.15
2.1mm Plug to 2.1mm Plug	3A	PA3707	$3.95	$3.55	$3.15

Product Data:

We have so much data and fact sheets, we cannot fit it all in our catalogue. Check out our website for over 4,000 pages of data!

HARSH ENVIRONMENT

IP67 Rated Multiple Pole Harsh Environment Connectors

C16-1 series connectors offer 3 or 6 pole with pre-engaging earth contact. The mating parts screw together securely to provide environmental protection to IP67.

PP1000

PS1001

PP1004

HIRSCHMANN

Specifications	3 POLE + PE*	6 POLE + PE*
Current Rating	16A	10A
Voltage Rating	380VAC 450VDC	
Insulation Resistance	>10Gohms	
Contact Resistance	<5mohms	
Max Wire Size	2.5mm²	0.75mm²

6 Pole

	Cat.	Qty 1+	Qty 10+	Qty 50+
PE Line Plug	PP1000	$21.95	$19.45	$17.45
PE Line Socket	PS1001	$21.95	$19.45	$17.45
PE Chassis Plug	PP1002	$15.95	$13.95	$12.45
PE Chassis Socket	PS1003	$15.95	$13.95	$12.45
Plug Dust Cap	PP1004	$9.95	$8.75	$7.75

PS1007

PS1009

PP1006

Environmental	ALL MODELS
Temperature Range	-40°C to +100°C
Protection	IP67 to IEC60529/ DIN40050
Housing	Polyamide 66 Nylon
Strain Relief	Screw clamp & Gland Nut

Note:
** Means Pre-Engaging.*

HIRSCHMANN

3 Pole

	Cat.	Qty 1+	Qty 10+	Qty 50+
PE Line Plug	PP1006	$19.95	$17.95	$15.95
PE Line Socket	PS1007	$19.95	$17.95	$15.95
PE Chassis Plug	PP1008	$14.95	$13.45	$11.95
PE Chassis Socket	PS1009	$14.95	$13.45	$11.95
Socket Dust Cap	PS1005	$9.95	$8.75	$7.75

LTW IP67 HARSH ENVIRONMENT CIRCULAR CONNECTORS

Perfect for harsh environments such as marine, industrial, outdoor, automotive, etc.

- IP67 rated
- Locking bayonet connection
- Gold plated
- UL rated
- Wide temp.: -40°C to +105°C
- Solder pins
- 2 pin version rated to 5A

PS0541

PS0542

PS0547

	Cat.	Qty 1+	Qty 10+	Qty 50+
2 Pin Line Socket	PS0541	$14.95	$13.45	$11.95
2 Pin Panel Mount Plug	PP0542	$8.95	$7.95	$6.95
Dust Cap to suit	PS0547	$6.95	$6.25	$5.50

M8 CIRCULAR

Commonly used in process control instrumentation. All connectors are field installable.

- 3A rated

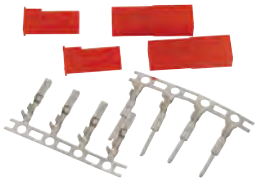
PS4301

Type	Cat.	Qty 1+
3 Way Socket	PS4301	$4.95
4 Way Socket	PS4303	$4.95

JST / XHP / PH2 CRIMP

JST Crimp Connectors 2 Way

JST type crimp connectors for hobby use. Extensively used on batteries and other connectors in RC hobbies and models. Sold as a pair of 2 mating M/F connectors. Suitable for cable up to 1.3mm OD.



	Cat.	Qty 1+	Qty 10+	Qty 50+
	PT4452	$4.95	$4.45	$3.90

Connectors Kit with Popular JST XHP and PH2 Headers

NEW

The kit includes the JST XHP 2,3,4, and PH2 housings and headers. Commonly used for prototyping, repairs, and many more applications.

See the website for full contents

	Cat.	Qty 1+	Qty 10+	Qty 50+
320 Piece	PT4457	$19.95	$17.95	$15.95

DEANS & BULLET STYLE

60A 2 Pole Gold Plated Connector Set

These are the industry standard in high performance connectors. Rated number one by RC Car Action, the world's leading RC car racing magazine. These connectors offer considerably less resistance than their competitors and are rated at 60 amps. Supplied as a pair.

Rating		Cat.	Qty 1+	Qty 10+	Qty 50+
60A	Pair	PT4450	$4.95	$4.45	$3.95

EC3 Bullet Connectors

Polarity sensitive EC3 bullet style plug and socket. Commonly used to connect Li-Po batteries to RC motors.

- Solder type. 1 plug and socket per packet

Rating	Cat.	Qty 1+	Qty 10+	Qty 50+
40A	PT4456	$4.95	$4.45	$4.00

EC5 Bullet Connectors - Plug & Socket

Essentially 5mm banana connectors in a case capable of up to 120 continuous amp with 10 awg wire. The popularity of this connector has grown as it is now widely used on RC & portable power products.

- Sold as a pair of plug & socket

Rating	Cat.	Qty 1+	Qty 10+	Qty 50+
40A	PT4454	$4.95	$4.45	$4.00

XT60 2 Way Bullet Connectors

Made from high temperature nylon with gold plated terminals. Ensures a solid high current connection that will handle 65 amps constant.

- Solder type. One plug & socket per packet

Rating	Cat.	Qty 1+	Qty 10+	Qty 50+
65A	PT4458	$4.95	$4.45	$4.00

NBN 8 Pin Connector with Bare Leads

This NBN Replacement connector is a Molex 8 Pin plug pre-assembled with 2C 300mm cable with bare ends. Simply clip the connector of any standard 12V 2.5A plug pack and solder/ heathshrink this connector on. This power supply can now be used to bypass your NBN battery back-up.

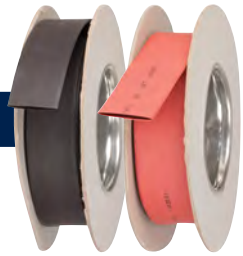
	Cat.	Qty 1+	Qty 10+	Qty 50+
Molex for NBN Battery	PP2028	$4.95	$4.45	$3.95

HEATSHRINK

Heatshrink Tubing - 5m Roll - 2:1

Purchase as a 5m box that can be neatly stacked and organised in the workshop or tradesman's van. Shrink with a heat gun, hairdryer or gas burner.

2:1 Shrink Ratio
Halogen Free



Specifications	ALL MODELS
Material	Polyethylene
Shrink Ratio	2:1
Operating Temperature	-55°C to +125°C
Shrink Temperature	Start at 70°C and full recovery at 110°C
Flammability	VW-1
Approvals	RoHS and UL224
Colour	Black or Red
Roll Length	5m
Box Dimensions	49(W) x 177(H) x 165(D)mm

Dia	Shrinks to	Black	Red	1+ Rolls	4+ Rolls	10+ Rolls
1.5mm	0.75mm	WH5680	WH5690	$5.85	$5.25	$4.65
2.5mm	1.25mm	WH5681	WH5691	$6.75	$6.05	$5.40
3.0mm	1.5mm	WH5682	WH5692	$7.45	$6.70	$5.95
5.0mm	2.5mm	WH5683	WH5693	$7.95	$7.15	$6.35
10.0mm	5mm	WH5684	WH5694	$11.95	$10.45	$9.45
16.0mm	8mm	WH5685	WH5695	$15.95	$13.95	$12.45
20.0mm	10mm	WH5686	WH5696	$22.95	$20.45	$17.95

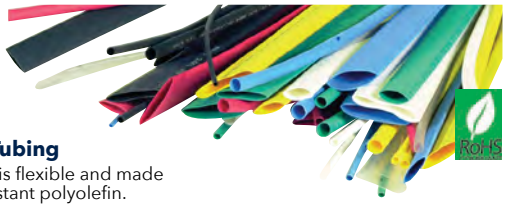
Heatshrink Tubing with Glue Lining 4:1

The heat sensitive glue on the internal wall of the tube melts when heat is applied, allowing for a professional water and dust resistant seal.

- Sold in 1.2m lengths

4:1 Shrink Ratio
Halogen Free

Dia	Shrinks to	Red	Black.	Qty 1+	Qty 4+	Qty 10+
4mm	1mm		WH5640	$4.95	$4.45	$3.90
6mm	1.5mm		WH5641	$5.65	$4.95	$4.45
8mm	2mm **NEW**	WH5647	WH5642	$6.95	$6.25	$5.55
12mm	3mm		WH5643	$7.95	$7.15	$6.35
16mm	4mm		WH5644	$8.95	$8.05	$7.15
19mm	4.75mm		WH5645	$13.95	$12.45	$10.95
24mm	6mm		WH5646	$16.95	$14.95	$13.45



Heatshrink Tubing

Our heatshrink is flexible and made from flame-resistant polyolefin.

- Made to UL224 E180908 125°C
- Shrinks to 50% of its size
- Shrink with a heatgun, hairdryer or a gas burner, match etc
- 1.2m Lengths

2:1 Shrink Ratio
Halogen Free

** Clear heatshrink not halogen free.*

Dia (mm)	Shrinks to (mm)	Green	Black	Red	Clear*	Blue	White	Yellow	Qty 1+	Qty 4+	Qty 10+
1.5	0.75	WH5510	WH5530	WH5540	WH5550*	WH5560	WH5570	WH5590	$1.45	$1.30	$1.15
2.5	1.25	WH5511	WH5531	WH5541	WH5551*	WH5561	WH5571	WH5591	$1.65	$1.45	$1.30
3.0	1.5	WH5512	WH5532	WH5542	WH5552*	WH5562	WH5572	WH5592	$1.85	$1.65	$1.45
5.0	2.5	WH5513	WH5533	WH5543	WH5553*	WH5563	WH5573	WH5593	$1.95	$1.75	$1.55
6.0	3	WH5514	WH5534	WH5544	WH5554*	WH5564	WH5574	WH5594	$2.25	$1.95	$1.80
10	5	WH5515	WH5535	WH5545	WH5555*	WH5565	WH5575	WH5595	$2.95	$2.60	$2.30
16	8	WH5516	WH5536	WH5546	WH5556*	WH5566	WH5576	WH5596	$3.95	$3.45	$3.15
20	10	WH5517	WH5537	WH5547	WH5557*	WH5567	WH5577	WH5597	$5.75	$4.95	$4.60

161 Piece Heatshrink Pack with Gas Powered Heat Blower

A great addition to your workshop or toolbox. The handy box includes an assortment of 160 heatshrink tubes in 7 different colours and diameters, plus 1 gas powered heat gun with Piezo ignition and flame or flame-less output. All supplied in a transparent lightweight box that measures.

- Dimensions: 242(L) x 175(W) x 30(H)mm
- Use NA1020 Butane Gas

Colour
15mm x 500mm: Black
1.5mm x 100mm: 10 x green, red, yellow, blue, white & transparent
2.5mm x 100mm: 6 x green, red, yellow, blue & transparent, 5 x white
3.5mm x 100mm: 4 x green, red, yellow, blue & white, 4 x transparent
5.0mm x 100mm: 3 x green, yellow, blue & white, 4 x red & transparent
6.0mm x 100mm: 2 x red, yellow, blue & transparent, 1 x green & white
10mm x 100mm: 2 x red, yellow, blue & transparent, 1 x green & white

Pack	Cat.	Qty 1+	Qty 3+	Qty 6+
161 Pieces	TH1620	$44.95	$39.95	$35.95

Heat Shrinkable Braided Sleeving

Provides added protection to cables against flames and abrasion. Consists of polyester multi-filament and special modified polyolefin filament, which will shrink when exposed to a heat source (Heat gun recommended). The unique woven construction makes it extremely flexible and easy to install on the hoses with irregular shapes.

Specifications	ALL MODELS
Operating Range	-40°C to +125°C
Minimum Shrink Temperature	80°C
Minimum Fully Recovery Temperature	120°C
Flammability	Self-extinguishing
Shrinking Ratio	2:1
Approved	RoHS, Halogen Free
Shrink Ratio	2:1
Length	1.2mm

Size (mm)	Shrinks to (mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
10	5	WH5620	$4.95	$4.45	$3.95
20	10	WH5622	$5.95	$5.35	$4.75
25	12.5	WH5624	$7.95	$7.15	$6.35
30	15	WH5626	$9.95	$8.95	$7.95

Yellow & Green Heatshrink Tubing

- 1.2m lengths
- Ideal for indicating earth connections
- Abrasion Resistant & Flame Retardant

2:1 Shrink Ratio

Size (mm)	Shrinks to (mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
3	1.5	WH5610	$2.95	$2.60	$2.30
10	5	WH5612	$3.95	$3.45	$3.15

Heatshrink Tube - 50mm Black

Ideal for bundling battery packs, but also used for grips on kayak paddles etc. Supplied in 300mm lengths.

2:1 Shrink Ratio
Halogen Free

Size (mm)	Shrinks to (mm)	Cat.	Qty 1+	Qty 4+	Qty 10+
50	25	WH5582	$5.95	$5.35	$4.75

HEATSHRINK PACKS

Comprehensive Heatshrink Pack

- 1 length each of 7 different colours in 7 different sizes ranging from 1.5mm diameter to 20mm.
- Sizes: 1.5, 3, 5, 6, 10, 16 & 20mm

Note: Clear is NOT Halogen Free.

2:1 Shrink Ratio
Halogen Free

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
7 Pieces	WH5520	$16.50	$14.50	$13.00

Glue Lined Pre-cut Heatshrink Tubing - Trade Pack

A box of six common sizes of 95mm long glue lined heatshrink. Includes 20 pcs 4.0mm, 15pcs. 6.0mm, 10pcs 8.0mm, 5pcs 12mm, 5pcs 16mm & 5pcs 19mm - 60pcs total. This is an economical way to get this product.

- Supplied in a see-through nylon snap shut case
- Box dimensions: 205(W) x 108(D) x 35(H)mm

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
60 Pieces	WH5521	$34.95	$30.95	$27.95

Handy Heatshrink Pack

Handy assortment of our high quality heatshrink tubing. Sizes from 1.5mm to 10mm.

- 10 pieces in all of 300mm & 150mm length
- Colour Red & Black

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
10 Pieces	WH5525	$7.95	$6.95	$6.25

Heatshrink Assortment Trade Pack

All the heatshrink the technician, tradesman or serious hobby user will ever need. The pack contains 160 lengths of different sizes in a handy storage case.

- 1.5mm: 40 x black, 10 x red, 10 x clear
- 2.5mm: 25 x black, 5 x red, 5 x clear
- 3mm: 17 x black, 4 x red, 4 x clear
- 5mm: 14 x black, 3 x red, 3 x clear
- 6mm: 6 x black, 2 x red, 2 x clear
- 10mm: 6 x black, 2 x red, 2 x clear
- Case size: 205(L) x 110(W) x 35(H)mm

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
160 Pieces	WH5524	$24.95	$22.45	$19.95

HIGH TEMPERATURE SLEEVING

High Temperature Basalt Fibre Sleeving

This protective sleeve has been woven from extruded volcanic rock and is the ultimate in cable protection! It will handle temperatures up to 650°C (Our previous fibreglass based product only went up to 450°C). It is also quite strong and abrasion resistant.

Sold in a 1 metre pack and available in two diameters.

Size(mm)	Length	Cat.	Qty 1+	Qty 4+	Qty 10+
3	1m	WS5510	$5.95	$5.35	$4.75
6	1m	WS5511	$7.95	$7.15	$6.35

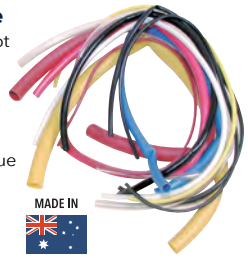
CABLE SLEEVING & WRAP

PVC Spaghetti Tubing Pack - 12 Piece

This sleeving is made from soft PVC. It does not shrink with heat. It is ideal for high-voltage protection of smaller wires, has abrasion resistance or you can bundle several smaller wires inside a length.

- 4 sizes - 1.5, 3.0, 5.0 & 10mm
- Colours - black, red, yellow, white, clear & blue
- All 300mm long
- 85°C rated

Note: Colour quantities vary from pack to pack.



MADE IN

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
12 Pieces	WS5502	$9.95	$8.75	$7.75

Expandable PPS Sleeving

This PPS (Polyphenylene Sulphide) monofilament sleeving is ideal in high temperature environments and offers a lightweight mechanical protection to your cabling. The construction expands up to 3 times to allow easy insertions of cables and reverts back to original diameter for a snug fitment. The open weave design also dissipates heat and doesn't trap moisture.

Specifications	ALL MODELS
Material	Polyphenylene Sulphide (PPS) monofilament UL94 V-0
Operating Temperature	-70°C to 200°C
Colour	Black
Length	2m

Size (mm)	Length	Cat.	Qty 1+	Qty 4+	Qty 10+
3	2m	WH5584	$3.95	$3.55	$3.15
6	2m	WH5585	$4.50	$4.05	$3.60
10	2m	WH5587	$7.95	$7.15	$6.35
15	2m	WH5588	$12.95	$11.45	$9.95

Braided Hook & Loop Loom Wrap - 1.5m

A fantastic solution for keeping cables wrapped up and neatly arranged. Wraps around your cables and secures them with hook and loop. When you need to add or remove cables, just undo the hook and loop. Couldn't be easier!

- Hook and loop width: 20mm
- Material : Polyester
- Working temperature: -50°C to 150°C
- Melting point: 230°C +/- 5°C

Size (mm)	Length	Cat.	Qty 1+	Qty 4+	Qty 10+
32	1.5m	WH5654	$18.95	$16.95	$14.95
51	1.5m	WH5656	$22.95	$20.45	$17.95

Self-Closing Braided Wrap

Protect cabling neat and tidy, and protected from abrasion, wear and tear using this flame resistant self closing wrap. Each 2m length is flexible and lightweight, and the open structure allows it to be easily installed without having to remove connectors or terminals.

Specifications	ALL MODELS
Material	PET Polyethylene Terephthalate
Operating Range	-50°C to +150°C
Melt Point	250°C +/- 5°C
Flammability	VW-1
Certificate	RoHS, Halogen Free
Cutting Tool	Hot knife
Colour	Black
Length	2m

Size (mm)	Length	Cat.	Qty 1+	Qty 4+	Qty 10+
6	2m	WH5630	$8.95	$8.05	$7.15
9	2m	WH5632	$9.95	$8.95	$7.95
13	2m	WH5634	$13.95	$12.45	$10.95
19	2m	WH5636	$16.95	$14.95	$13.45

Related Product:

2000W 240V ADJUSTABLE TEMPERATURE HEAT GUN

See page A27 for more details

Cat.	Qty 1+	Qty 3+	Qty 6+
TH1609	$29.95	$26.95	$23.95

HEATSHRINK ACCESSORIES

Solder Splice Heatshrink Tube

Solder splice heat shrink tubes allow you to quickly join two cables thanks to the small section of solder in the middle of the tube. Simply slide a tube over the join in two cables and heat as you would any other shrink tube. As the tube shrinks the solder melts to electrically connect the wires resulting in a join which is reliable and well insulated. Available in four sizes approximately 26-40mm in length with 5 pieces per pack. Shrink ratio 2:1.

- Minimum shrink temp.: 85°C
- Starting temp. of solder melt: 140°C
- Operating temp.: - 55°C to 125°C
- Minimum full recovery temp.: 160°C

Dia. x Length (mm)	Pk	Colour	Cat.	Qty 1+	Qty 4+	Qty 10+
1.7 x 26	6	Clear	WH5669	$5.95	$5.35	$4.75
2.7 x 40	5	Red	WH5670	$5.95	$5.35	$4.75
2.7 x 40 **NEW**	100	Red	WH5697	$69.95	$62.95	
4.5 x 40	5	Blue	WH5671	$5.95	$5.35	$4.75
4.5 x 40 **NEW**	100	Blue	WH5698	$69.95	$62.95	
6.0 x 40	5	Yellow	WH5672	$5.95	$5.35	$4.75
6.0 x 40 **NEW**	100	Yellow	WH5699	$69.95	$62.95	

Assorted Solder Splice Heatshrink Pack

A handy assorted pack of 42 solder splice heatshrink tubes to join electrical wires quickly and easily and make a good quality join. Each splice has just the right amount of solder to create a secure connection. Kit includes:

- 12 x White 1.7 x 26mm
- 12 x Red 2.7 x 40mm
- 12 x Blue 4.5 x 40mm
- 6 x Yellow 6.0 x 40mm

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
42	WH5668	$39.95	$35.95	$31.95

TAPE

Heatshrink Tape - Black

Ideal for emergency repairs or when you aren't able to use a piece of tubing. It conforms to odd shapes that heatshrink tubing is unable to, and has a low melting point adhesive for easy installation. It also remains flexible at extremely low temperatures. Keep a roll in the toolbox.

- Operating temperature: -40 - 105°C
- Shrink temperature: 125°C

Width (mm)	Length	Cat.	Qty 1+	Qty 4+	Qty 10+
25	5m Roll	WH5659	$16.95	$14.95	$13.45

WIRE GLUE

Wire Glue

A soldering iron in a jar. Wire Glue is an electrically conductive adhesive that enables you to make solder-free connections when you don't have a soldering iron handy, or aren't able to apply heat for some reason. Hundreds of hobby, trade and electronics uses. Lead-free, cures overnight.

	Cat.	Qty 1+	Qty 4+	Qty 10+
9ml	NM2831	$9.95	$8.75	$7.75

CABLE MANAGEMENT

Rectangular Cable Duct - 1m

Keep your home theatre cables under control and neatly out of the way. Available in two sizes and in convenient 1m lengths, the leads to your wall-mounted TV will be kept bundled up but easily accessible. The cover can be quickly removed and replaced for maintenance and can be painted to match the colour of your wall.

Size (mm)	Length	Cat.	Qty 1+	Qty 4+	Qty 10+
25 x 16	1m	HP1330	$6.95	$6.25	$5.50
50 x 25	1m	HP1332	$9.95	$8.75	$7.75

Floor or Wall Cable Ducting

This extruded ducting helps conceal messy cables across doorways, along skirting boards or walls. The ducting is 50.8mm wide and is sold in convenient 1.83m lengths.

Size	Cat.	Qty 1+	Qty 4+	Qty 10+
1.83m	HP1226	$18.95	$16.95	$14.95

Carpet Cable Cover - Sold by the Roll or Metre

Conceal unsightly cords and eliminate trip hazards with this low profile cord cover. Its 'cut to length' flexibility avoids the constraints of similiar cord covers. Just lay it over your cords, and let the "hook and loop" technology on the underside do its job on your nylon based carpet to secure your cables in place. The channel along the middle allows you to reconfigure your set up without the need to remove any cords. Re-usable over 1,000 times, machine washable and a fraction of the price of other carpet cord covers. The ideal solution for any office, boardroom, meeting room or public space. Choose from black to keep cable runs discreet, or yellow to prevent people tripping over it.

- 100mm wide
- Sold in handy 5m roll, 25m dispenser box, or by the metre

Sold Per Metre from 25m Dispenser		Cat.	Qty 1+	Qty 5+	Qty 25+
Black	Per Metre	HP2000	$12.95	$9.99	$8.76
Yellow	Per Metre	HP2002	$12.95	$9.99	$8.76
5 Metre Rolls		**Cat.**	**Qty 1+**	**Qty 4+**	**Qty 10+**
Black	5m Roll	HP2004	$49.95	$44.95	$39.95
Yellow	5m Roll	HP2006	$46.95	$39.95	$36.95

Carpet Cable Cover 1.5m

Increase safety when cables need to be laid across floors. It's durable and will significantly reduce the trip-hazard of cables. Secures to carpet with plastic hook & loop.

- Weight: 135g
- Length: 1.5m
- Dimensions: 1500(L)m x 120(W)mm

Width (mm)	Length	Cat.	Qty 1+	Qty 4+	Qty 10+
120	1.5m	HP1231	$14.95	$13.45	$11.95

Cable Tags

Clip them over your cable so you know what you're unplugging (before you disconnect the wrong thing!). Suits most power and A/V cables. Pack of 8 with writable surface.

- Universal
- Weight: 1.2g
- Dimensions: 34(L) x 16(W) x 3(H)mm
- Material: Thermoplastic Rubber

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
8	HP1253	$6.95	$6.25	$5.55

Cable Clips

Universal fit to keep your cables where you want them. Included genuine 3M adhesive tape. Simply stick down, and push your cable into place. Pack of 6.

- Universal (Cable dia. up to 8mm)
- Genuine 3m tape
- Weight: 5g
- Dimensions: 28(Dia.) x 15(H)mm

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
6	HP1254	$6.95	$6.25	$5.55

Desk Cable Organiser

Provides 5-slots for keeping cables from sliding off the table. Great for laptops, charging cables, or anywhere you temporarily connect devices.

- Rubber moulded design
- Weighted base
- Weight: 66g
- Dimensions: 70(W) x 30(D) x 40(H)mm

	Cat.	Qty 1+	Qty 4+	Qty 10+
	HP1255	$6.95	$6.25	$5.55

CABLE MANAGEMENT CONTINUED

Dune Tube with Applicator

Keep your cables neat and tidy. They are easily bent for corners and are slit so cables can enter or leave at any point. Simply slip in the cable, insert the applicator and slide away. Easier to use than Spiral Binding; more secure than Loom Tube!

- Made from black flexible plastic INCLUDES SPECIAL WIRE SHUTTLE.

Dia.	Length	Cat.	Qty 1+	Qty 4+	Qty 10+
15mm	2.5m	HP1235	$11.95	$10.45	$9.45
20mm	2.5m	HP1237	$13.95	$12.45	$10.95
20mm	10m	HP1239	$46.95	$41.95	$36.95

Spiral Binding

Keep wiring tidy! Available in 2 sizes and colours and is easily wrapped around bunches of cables to keep them tidy.

Type	Length	Cat.	Qty 1+	Qty 4+	Qty 10+
6mm Clear	2.5m	HP1218	$3.50	$3.15	$2.80
12mm Clear	1.5m	HP1219	$4.50	$4.05	$3.60
6mm Black	2.5m	HP1220	$3.50	$3.15	$2.80
12mm Black	1.5m	HP1222	$4.50	$4.05	$3.60

Round Desk Grommet

The perfect way to easily and neatly store your cables. It is ideal for installation in desks, workstation's, telephone cabinets or entertainment unit's. Simply drill or cut a 60mm hole through the surface & insert the grommet into the hole.

- Dimensions: 60mm (diameter) / Black in colour

Dia.	Cat.	Qty 1+	Qty 4+	Qty 10+
60mm (diameter)	HP1228	$12.95	$11.45	$9.95

Loom Tubes

Tidy up the cables behind your PC or audio equipment, secure cabling in your car. The Loom Tube will keep wiring in place and suits many types of applications. The tube has a slit so that cables can enter/leave at any point along its length. Made from black flexible PVC.

- Diameters available: 7, 10, 19, 25, 40, 48mm
- Available in either 2m or 10m lengths - just cut to suit
- Good abrasion resistance

Dia.	Length	Cat.	Qty 1+	Qty 4+	Qty 10+
7mm	2m	HP1221	$3.45	$3.10	$2.75
10mm	2m	HP1224	$4.45	$4.00	$3.55
19mm	2m	HP1227	$5.75	$5.15	$4.60
25mm	2m	HP1801	$6.95	$6.25	$5.55
40mm	2m	HP1807	$9.95	$8.95	$7.95
48mm	2m	HP1810	$11.95	$10.45	$9.45
7mm	10m	HP1223	$14.95	$13.35	$11.70
10mm	10m	HP1225	$18.95	$16.95	$14.95
19mm	10m	HP1229	$24.95	$22.45	$19.95
25mm	10m	HP1804	$29.95	$26.95	$23.95

RUBBER FEET

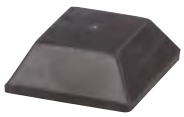
Small Stick On

Dimensions: 12 x 12mm

- Height 6mm
- Moulded in oil resistant synthetic rubber

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
4	HP0815	$2.50	$2.20	$1.95
20	HP0816	$7.95	$6.95	$6.25

Large Stick On



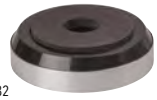
- Dimensions: 20 x 20mm
- Height 8mm
- Moulded in oil resistant synthetic rubber

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
4	HP0825	$3.95	$3.45	$3.15
20	HP0822	$9.95	$8.75	$7.75

Screw On Equipment Feet

- Silver in colour
- Screw on
- Pack of 4

HP0830



HP0832

Dia.	Cat.	Qty 1+	Qty 4+	Qty 10+
30	HP0830	$6.95	$6.25	$5.50
50	HP0832	$8.95	$7.95	$6.95

Screw Fixing Rubber Feet

Requires 3mm screw and nut.

- 11mm dia. x 7.5mm high
- Moulded in oil resistant synthetic rubber

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
8	HP0800	$4.50	$3.95	$3.60

RUBBER GROMMETS

Rubber Grommets

HP0702

Suitable for use with chassis up to 16 gauge/1.5mm.

- Moulded in oil resistant synthetic rubber - black colour

Cable Dia.	Chassis Hole	Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
6mm	9.5mm	8	HP0702	$3.95	$3.45	$3.15
9.5mm	12.7mm	8	HP0704	$4.65	$4.15	$3.60

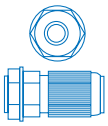
CABLE GLANDS

IP68 Nickel Plated Brass Cable Glands

These nickel-plated brass cable glands are certified to IP68 and provide superior grip and sealing. They are totally protected and O-ring sealed against the ingress of dust, moisture and water to a depth of one metre. The unique design speeds installation and eliminates the need to disassemble the gland before fitting. A self-adjusting cable seal allows the glands to be used on a wide range of cable sizes and minimises inventory holdings. These glands are supplied complete with seals and locknuts. 5 sizes are available.

Cable Size	Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
3 to 6.5mm	2	HP0744	$8.95	$8.05	$7.15
4 to 8mm	2	HP0745	$9.95	$8.95	$7.95
5 to 10mm	2	HP0746	$11.95	$10.45	$9.45
6 to 12mm	2	HP0747	$13.95	$12.45	$10.95
10 to 14mm	2	HP0748	$14.95	$13.45	$11.95

IP68 Waterproof Cable Glands



These unique cable clamps incorporate a unique sealing mechanism which works on the camera shutter principle. Simply mount the clamp, insert the cable through and tighten up. There is no need to disassemble the clamp prior to installation. These clamps are rated to IP68. They are totally dust tight and protected against submersion in water.

- Trapezoidal thread for quick high torque tightening
- No throwaway "O" rings
- Long metric thread
- Superior strain relief
- UL Approved NYLON 94V-2

Cable Dia.	Thread	Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
3-6.5mm	EP-7	2	HP0720	$4.95	$4.45	$3.90
4-8mm	EP-9	2	HP0724	$5.95	$5.35	$4.75
5-10mm	EP-11	2	HP0727	$6.95	$6.25	$5.55
6-12mm	EP-13.5	2	HP0732	$7.45	$6.70	$5.95
10-14mm	EP-16	2	HP0736	$7.95	$7.15	$6.35
13-18mm	EP-21	2	HP0740	$9.95	$8.95	$7.95

Cordgrip Clamps

HP0716 7.4mm - 8.2mm diameter (3 wire mains).

- Panel cutout 14mm
- Black nylon

HP0718 6.2mm - 7.4mm diameter

- Panel cutout 11.5mm

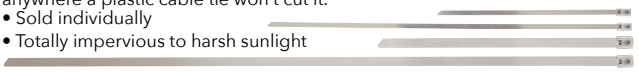
Cable Dia.	Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
7.4mm - 8.2mm	4	HP0716	$1.95	$1.75	$1.55
6.2mm - 7.4mm	4	HP0718	$1.95	$1.75	$1.55

CABLE MANAGEMENT

CABLE TIES

Metal Cable Ties

Made from 316 marine grade stainless steel for the ultimate in durability. Self-locking head design, suitable for virtually any use, boating, outdoors,underground, anywhere a plastic cable tie won't cut it.
- Sold individually
- Totally impervious to harsh sunlight



Length	Width	Cat.	Qty 1+	Qty 4+	Qty 10+
150mm	4.6mm	HP1182	$5.95	$5.35	$4.75
290mm	4.6mm	HP1184	$6.95	$6.25	$5.55
200mm	7.9mm	HP1186	$7.95	$7.15	$6.35
520mm	7.9mm	HP1188	$11.95	$10.45	$9.45

Plastic Cable Ties

- UV resistant black nylon
- Safe edges

Length	Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
100mm	20	HP1200	$1.85	$1.65	$1.45
150mm	15	HP1201	$2.25	$1.95	$1.80
200mm	15	HP1202	$2.50	$2.20	$1.95
300mm	15	HP1245	$2.95	$2.60	$2.30
500mm	15	HP1248	$6.95	$6.25	$5.55
605mm	15	HP1249	$9.95	$8.95	$7.95
100mm	100	HP1203	$4.95	$4.45	$3.90
150mm	100	HP1204	$7.95	$6.95	$6.25
200mm	100	HP1205	$10.95	$9.75	$8.75
300mm	100	HP1246	$14.95	$13.45	$11.95
100mm	500	HP1211	$17.95	$15.95	$14.35
150mm	500	HP1212	$29.95	$26.95	$23.95
200mm	500	HP1213	$39.95	$35.95	$31.95
300mm	500	HP1247	$54.95	$48.95	$43.95

Extra Long Mixed Cable Tie Set

This handy cable tie set contains 70 black cable ties of various lengths up to 500mm.
- 10 pcs 500(L) x 10(W)mm
- 10 pcs 510(L) x 8(W)mm
- 20 pcs 400(L) x 5(W)mm
- 30 pcs 300(L) x 4(W)mm

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
70	HP1209	$29.95	$26.95	$23.95

Coloured Cable Ties

Identify wiring looms with different coloured cable ties. Pack includes 25pcs each of red, yellow, green, blue and black.
- Total 125 cable ties
- Length 100mm

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
125	HP1196	$9.95	$8.75	$7.75

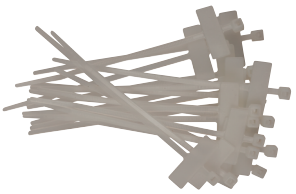
Mixed Hook & Loop Cable Ties

Keep your cables neat and tidy. Packet of 16 hook & loop cable ties in assorted sizes from 125 to 180mm.

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
16	HP1232	$14.95	$13.45	$11.95

100mm Label Cable Ties

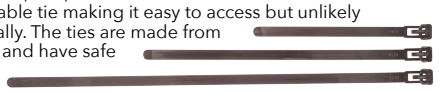
Ideal for large or complex wiring looms, these allow you to label cable bundles for identification later to make tracing or fault finding easy. Easily marked with permanent marker or self-adhesive labels.



Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
20	HP1244	$3.50	$3.15	$2.75

Releasable Cable Tie Pack

Releasable cable ties are perfect for temporarily securing cables or for jobs where you need to periodically change cables. This handy pack contains 10 pieces at lengths of 125, 200, and 300mm. The release lever is located below the head of the cable tie making it easy to access but unlikely to be released accidentally. The ties are made from UV resistant black nylon and have safe edges to prevent cuts.



Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
10	HP1217	$9.95	$8.95	$7.95

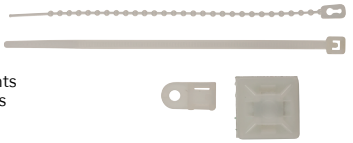
Reusable Flexible Black Cable Ties 8 Pack

Reusable cable ties used to temporarily mount LED strip lights in place on poles, tree branches, etc.

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
Reusable 8	HP1234	$6.95	$6.25	$5.55

Cable Tie Tidy Kit

Consists of:
- 30 x 120mm cable ties,
- 20 x 120mm reusable cable ties,
- 10 x self adhesive cable tie mounts
- 20 x saddle type cable tie mounts



	Cat.	Qty 1+	Qty 4+	Qty 10+
80	HP1198	$12.95	$11.45	$9.95

Cable Tie Box - 400 Pieces

Let's face it, the mixed box of cable ties in all the colours of the rainbow is fine, however most of the time you only use about 2-3 different sizes and the black colour because of its UV stability. This is your box. This kit consists of: 100 pcs x 200mm, 100 pcs x 150mm, 200 pcs x 100mm. All in a see through flat storage case that makes access to the ties easy. The box even has some compartment dividers included so that it becomes a parts storage box when all of the ties have been used up.
- Box dimensions: 250(W) x 180(D) x 40(H)mm

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
400	HP1216	$26.95	$23.95	$21.45

Cable Tie Gun

Once you have wrapped the tie around the cable you simply slide the tail into the gun and pull the trigger. This will tighten the tie and cut off the excess to produce a neat and professional finish.
- Tension adjustment for different ties

	Cat.	Qty 1+	Qty 4+	Qty 10+
	TH2600	$29.95	$26.95	$23.95

Hook & Loop Cable Ties

Tidy up behind the TV or audio equipment with these re-usable hook & loop cable ties. Each tie is 140mm in length.

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
5	HP1210	$4.95	$4.45	$3.90

CABLE TIE MOUNTS

Adhesive Cable Tie Mounts

These are used in conjunction with our cable ties. They simply stick to the surface, then the cable tie is looped through and around the cables.
- 21mm square

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
10	HP1195	$4.50	$3.95	$3.60

Concrete Cable Tie Mounts

Use these cable tie mounts in runs along walls and ceilings made of brick or concrete.
- UL 94V-2 approved Nylon
- Hole required: Approx. 7mm dia x 37mm deep

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
20	HP0795	$6.95	$6.25	$5.55
100	HP0796	$27.95	$24.95	$21.95

FASTENERS & SCREWS

Metric Nylon Fasteners

- Precision moulded from white nylon
- Fully insulated
- Corrosion free and won't shake loose
- Supplied in polybag

M3 Nylon Screws, Nuts & Washers

Size	Type	Pk	Cat.	Qty 1+	Qty 4+	Qty 10+
M3 x 12mm	Screws, Phillips Drive	10	HP0140	$2.95	$2.60	$2.30
M3 x 25mm	Screws, Phillips Drive	10	HP0142	$3.50	$3.15	$2.75
M3 Nuts	Hex	10	HP0146	$3.00	$2.60	$2.30
M3 Nuts	Hex with Washer	25	HP0150	$6.50	$5.75	$4.95
M3 Washer	Flat	10	HP0148	$2.50	$2.20	$1.95

M4 Nylon Screws, Nuts & Washers

Size	Type	Pk	Cat.	Qty 1+	Qty 4+	Qty 10+
M4 x 10mm	Screws, Phillips Drive	25	HP0160	$7.50	$6.75	$5.95
M4 x 16mm	Screws, Phillips Drive	25	HP0162	$9.50	$8.55	$7.60
M4 Nuts	Hex	25	HP0168	$7.00	$6.25	$5.50
M4 Washers	Flat 10mmOD, 4.2mm ID	25	HP0166	$5.00	$4.45	$3.95

Woodscrews - Phillips Head

- Ideal for mounting speakers
- Black finish
- No.6 size suitable for tweeters, midrange and crossovers
- No.10 size suitable for Woofers

Size	Type	Pk	Cat.	Qty 1+	Qty 4+	Qty 10+
No.6 x 15mm	Round Head (Tweeters)	20	HP0620	$4.95	$4.45	$3.90
No.6 x 15mm	Countersunk	20	HP0626	$4.95	$4.45	$3.90
No.8 x 25mm	Countersunk	20	HP0625	$5.95	$5.25	$4.75
No.10 x 30mm	Round Head (Woofers)	20	HP0624	$5.95	$5.25	$4.75
No.10 x 30mm	Countersunk	20	HP0628	$5.95	$5.25	$4.75

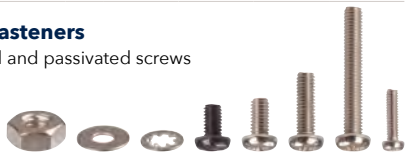
Self-Tapping Screws

- Nickel plated Steel

Size	Type	Pk	Cat.	Qty 1+	Qty 4+	Qty 10+
No.4 x 6mm	Phillips Head	25	HP0550	$3.00	$2.60	$2.30
No.4 x 9mm	Phillips Head	25	HP0565	$4.95	$4.45	$3.95
No.4 x 12mm	Phillips Head	25	HP0554	$3.50	$3.15	$2.75
No.8 x 12mm	Phillips Head	25	HP0558	$4.00	$3.60	$3.15

Metric Metal Thread Fasteners

- Nickel or Cadmium Plated and passivated screws
- Supplied in polybag



M2 Screws

Size	Type	Pk	Cat.	Qty 1+	Qty 4+	Qty 10+
M2 x 8mm	Screw, Pozi Drive	4	HP0390	$1.50	$1.35	$1.20

M3 Equipment Screws

*Black japanned screws used holding top/side panels on VCR, DVD, Amplifiers, etc.

Size	Type	Pk	Cat.	Qty 1+	Qty 4+	Qty 10+
M3 x 5mm	Screw, Phillips, Black	25	HP0440	$2.30	$2.03	$1.80
M3 x 5mm	Screw, Phillips, Black	200	HP0441	$7.95	$7.15	$6.35

M3 Screws, Nuts & Washers

Size	Type	Pk	Cat.	Qty 1+	Qty 4+	Qty 10+
M3 x 6mm	Screw, Phillips	25	HP0400	$2.50	$2.20	$1.95
M3 x 6mm	Screw, Phillips	200	HP0401	$7.95	$7.15	$6.35
M3 x 10mm	Screw, Phillips	25	HP0403	$3.00	$2.60	$2.30
M3 x 10mm	Screw, Phillips	200	HP0404	$8.95	$8.05	$7.15
M3 x 15mm	Screw, Phillips	25	HP0406	$3.50	$3.15	$2.75
M3 x 15mm	Screw, Phillips	200	HP0407	$9.95	$8.95	$7.95
M3 x 20mm	Screw, Phillips	25	HP0410	$3.50	$3.15	$2.75
M3 x 25mm	Screw, Phillips	25	HP0414	$3.50	$3.15	$2.75
M3 x 32mm	Screw, Phillips	25	HP0418	$4.00	$3.60	$3.15
M3 Nuts	Hex	25	HP0425	$2.95	$2.60	$2.30
M3 Nuts	Hex	200	HP0426	$9.95	$8.75	$7.75
M3 Washers	Flat	25	HP0430	$3.00	$2.60	$2.30
M3 Washers	Flat	200	HP0431	$9.95	$8.95	$7.95
M3 Washers	Shakeproof	25	HP0433	$3.50	$3.15	$2.75
M3 Washers	Spring	25	HP0436	$4.95	$4.45	$3.95

M4 Screws, Nuts & Washers

SIZE	TYPE	Pk	Cat.	Qty 1+	Qty 4+	Qty 10+
M4 x 10mm	Screw, Phillips	25	HP0450	$3.50	$3.15	$2.75
M4 x 10mm	Screw, Phillips	200	HP0451	$12.95	$11.45	$9.95
M4 x 15mm	Screw, Phillips	25	HP0453	$4.50	$3.95	$3.60
M4 Nuts	Hex	25	HP0462	$3.50	$3.15	$2.75
M4 Washers	Flat	25	HP0465	$3.50	$3.15	$2.75
M4 Washers	Shakeproof	25	HP0468	$4.00	$3.60	$3.15

M6 Rack Screws, Nuts & Washers

Suitable for mounting rack style enclosures into rack units.

Size	Type	Pk	Cat.	Qty 1+	Qty 4+	Qty 10+
M6 x 16mm	Screw, Pozi Drive, Black	12	HP0300	$6.50	$5.85	$5.20
M6 Nuts	Captive Nuts	12	HP0310	$8.95	$8.05	$7.15
M6 Washer	Flat Washer	12	HP0322	$3.50	$3.15	$2.75

NUTS & SPRINGS

Potentiometer Nuts

Packet of 12 potentiometer nuts and washers.

Size	Thread	Pk	Cat.	Qty 1+	Qty 10+	Qty 50+
24mm	3/8" 32THD	12	RP3500	$6.50	$5.20	$4.55
16mm	Metric	12	RP7500	$6.50	$5.20	$4.55

200 Piece Spring Assortment

This set contains approximately 200 springs, with 20 different types, compression and tension. They range from 10mm long to 70mm long.

- Sizes for all are given on the lid
- Supplied in a plastic storage case

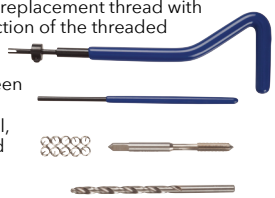
	Cat.	Qty 1+	Qty 4+	Qty 10+
200 Pieces	HP0638	$19.95	$17.95	$15.95

Thread Repair Kits (Small Metric) M4 - M6

These products enable you to drill out a stripped or otherwise damaged thread in a blind hole. You can then insert a replacement thread with the coiled thread inserts and regain full function of the threaded hole, often giving a much stronger thread than the original one. This also works when a damaged stud or screw shaft has been removed.

- Includes: Drill bit, thread tap, insertion tool, tag punch and 10 inserts of the nominated thread size.

Three versions available.



Type	Cat.	Qty 1+	Qty 3+	Qty 6+
For M4	HP1602	$29.95	$26.90	$23.70
For M5	HP1604	$29.95	$26.90	$23.70
For M6	HP1606	$29.95	$26.90	$23.70

SPACERS

Untapped Nylon PCB Spacers

Superb range of spacers. Fixing is by size 6 or 8 self tapping screws. The hex centre section can be gripped to prevent rotation while fixing.

- OD 8.2mm

Length	Pk	Cat.	Qty 1+	Qty 4+	Qty 10+
6mm	5	HP0980	$3.95	$3.55	$3.15
12mm	5	HP0982	$3.95	$3.55	$3.15
19mm	4	HP0984	$3.95	$3.55	$3.15
25mm	4	HP0986	$4.50	$4.05	$3.60
32mm	4	HP0988	$4.95	$4.45	$3.95
38mm	4	HP0990	$4.95	$4.45	$3.95

Untapped Nylon Spacers

- Untapped
- ID 4.1mm. OD 6.4mm

Length	Diameter	Pk	Cat.	Qty 1+	Qty 4+	Qty 10+
6mm	6mm	25	HP0930	$6.95	$6.25	$5.50
10mm	6mm	25	HP0934	$7.95	$6.95	$6.25

SPACERS CONTINUED

3mm Tapped Nylon Spacers

These spacers are tapped all the way through for a 3mm screw.
- OD 6mm

Length	Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
6.3mm	25	HP0920	$8.95	$7.95	$6.95
9mm	25	HP0922	$9.95	$8.95	$7.95
12mm	25	HP0924	$9.95	$8.75	$7.75
15mm	25	HP0926	$11.95	$10.70	$9.50

Untapped Metal Spacers

- Nickel plated steel
- Untapped
- ID: 3.4mm OD 4.7mm

Length	Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
6mm	8	HP0860	$4.50	$4.05	$3.60
9mm	8	HP0862	$4.75	$4.25	$3.80
12mm	6	HP0864	$5.50	$4.95	$4.40
25mm	4	HP0866	$5.75	$5.15	$4.60

3mm Tapped Metal Spacers

- Nickel plated brass
- 3mm standard metric thread

Length	Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
10mm	8	HP0900	$4.95	$4.45	$3.95
10mm	100	HP0901	$34.50	$30.50	$27.50
15mm	8	HP0904	$5.95	$5.35	$4.75
25mm	8	HP0907	$6.95	$6.25	$5.55

PCB STANDOFFS

Adhesive PCB Standoffs

The self adhesive base sticks directly to the chassis.
- Requires 4mm PCB hole
- Adhesive pads 18mm square
- Nylon

Height	Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
6.35mm	25	HP0760	$11.95	$10.70	$9.50
12.7mm	25	HP0762	$13.95	$12.35	$10.95

Screw Mount PCB Supports

These supports have a 2.5mm hole for securing to chassis with a screw, use 3 x 10mm or a self tapper.
- Requires 4mm PCB hole
- Nylon

Height	Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
10mm	25	HP0764	$7.95	$6.95	$6.25
20mm	25	HP0766	$9.95	$8.75	$7.75

Flush Mount PCB Supports

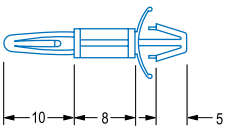
These virtually flush mount on the underside of the chassis.
- PCB hole 4mm
- Chassis hole 5.5mm
- Chassis thickness 0.8-1.2mm
- Nylon

Height	Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
6.35mm	25	HP0774	$6.95	$6.25	$5.50
10mm	25	HP0776	$7.50	$6.75	$5.95

Screwless PCB Standoff

- Nylon

Saves using nuts, bolts and spacers.
Size 8mm. Requires 3mm hole each end.



Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
8	HP0770	$2.50	$2.20	$1.95

Metal Right Angle Standoffs

Threaded M3 x 0.5 standoffs, right angle.

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
8	HP0872	$4.95	$4.45	$3.90

CABLE CLIPS / CLAMPS

Adhesive Cable / Bundle Mounts

These have an adhesive base 25 x 18mm and cable tie that clips into the base to retain individual cables, or bundles of wiring. The maximum cable bundle diameter accommodated is 17mm.
- The base also has a 3mm hole for a screw mount if required

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
10	HP1190	$7.95	$7.15	$6.35

Adhesive Cable Clips

The easy way to secure cables to walls, cabinets etc. Simply peel off adhesive cover and slip cable in.
- Please note all sizes are in mm
- Nylon

Cat.	L	H
HP0782	11.7	5.9
HP0784	13.4	8.2
HP0786	19.0	11.9

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
25	HP0782	$9.95	$8.95	$7.95
25	HP0784	$10.95	$9.85	$8.75
25	HP0786	$11.50	$10.35	$8.95

Cable Clips

These clips are made using a high-density polyethylene plastic material and galvanised high carbon steel nails. Available in packets of 25 and are priced up to 50% less than others.
- 4 sizes available

3 x 5mm

Accepts cables up to 3mm high by 5mm wide. Suits the following:
WB1706/WB1708 speaker cable & 6 core flat telephone cable.

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
25	HP0680	$2.45	$2.15	$1.95

5 x 8mm Expandable

Suits round cables with 5 x 8mm diameter - including 4 core alarm cable, 75Ω thin coax and 50Ω thin coax.

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
25	HP0682	$2.75	$2.45	$2.15

5 x 7mm

Accepts cable up to 5mm high by 7mm wide. Suits the following:
WB1706/WB1708 speaker cable & 6 core flat telephone cable

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
25	HP0692	$2.95	$2.60	$2.30

7 x 10mm Expandable

Suitable for round cable 7-10mm diameter - including 6 core alarm cable, air spaced coax and Belden coax.

Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
25	HP0694	$3.45	$3.05	$2.75

'P' Type Cable Clamps

- Nylon

Size	Pack	Cat.	Qty 1+	Qty 4+	Qty 10+
For 5mm cable	6	HP0752	$1.95	$1.75	$1.55
For 7mm cable	6	HP0754	$2.45	$2.15	$1.95
For 10mm cable	6	HP0756	$2.95	$2.60	$2.30

Delivery Details:

Name

Address

State Postcode Country

Phone

Email

If you have used our mail order before (else leave blank):
Please provide your account number:

Has your billing address changed since your last order?
Yes No

jaycar

Web: www.jaycar.com.au
Email: techstore@jaycar.com.au
Post: PO BOX 7172, Silverwater DC NSW 1811
Freecall: 1800 022 888
Phone: +61 (02) 8832 3245
Fax: +61 (02) 8832 3118
Office Hours: Mon-Fri 8.30am-5.30pm, Sat 8.30am-5pm (AEST)

Qty	Cat. No.	Description	Unit Price	Total Price	Office Use Only

Free Road Freight on Orders Over $99!

Up to 20kg. See below for other freight options.

FREIGHT CALCULATOR (ORDERS UNDER 20KG)		
	ORDER VALUE	PRICE
ROAD FREIGHT	Under $99	$8.00
PREMIUM FREIGHT#	All	$18.00
OVERSEAS AIRMAIL	All	POA^
ALL ORDERS 20KG & OVER - PRICE POA^		

Rewards Member Number, Trade Card Number, or Promotional Code:

GOODS TOTAL		(Min order $10)
INSURANCE†		$1 per $100 value or part there of. Australia only. See terms and conditions for details.
FREIGHT^		
SUBTOTAL		
TOTAL		

Aerosol, flammables, heavy and bulky items can only be sent by road.

Out of stock lines: Are not back ordered. Please re-order once item(s) are in stock. If your order is unusually bulky, heavy or fragile, we may choose to send your goods to you by road at our expense. We cannot send goods by road to a PO Box. However, if you feel your order may fit into this category, please include a street address - either work or home.

Freight information: Simply add the amount shown in the freight charges chart above. Don't forget to add extra amount for insurance if you require this service.

Final check: Please make sure that you have given full details of the products you require, the correct prices, the full postage or transportation cost, plus make sure that your name and address are legible. Your order will arrive faster if all details given are correct. Minimum order is $10.

14 day satisfaction guarantee: Provided that you have returned the goods in original condition (and that means the outer package, if any, must be unmarked). You must keep your invoice as proof of purchase. We will not refund post, packaging insurance or other transport charges. Freight on returned goods must be pre-paid. Do not return goods by COD. Please do not ask for a refund after 14 days from purchase date (this allows for transportation delays).

**Overnight delivery. Available on request subject to conditions. Max physical/cubic weight 5kg. Area must be covered by next day service (phone for details). No PO Box address.*

† One whole dollar per $100 goods value or part there of (Australia only). See Terms & Conditions for details.

^POA: Our staff will calculate the freight charge based on the order, freight method and destination. Staff will promptly contact you to advise of the charge.

#Orders made before 12:00pm delivered next working day for Metro areas, other areas 1-2 working days. Street addresses only - no delivery to PO Boxes.

Payment Details:

Cheque/Money Order in A$ *(do not post cash)*

Credit Account *(approved customers)*

Gift Card

or Credit Card:

Mastercard Visa Amex

Credit Card Number

Expiry [MM/YY] / Name on Card

Card Security Code Signature of Cardholder

For next day delivery, or Click and Collect, see page A4

DISCLAIMER All possible care has been taken in the preparation of this catalogue. However, specifications and particulars in relation to the products referred to in this catalogue are subject to change without prior notice. Some photographs contain samples which are representative only. Stocked item may vary in colour and look. Jaycar will not be held liable for any errors or omissions.

PRICES All prices quoted in this catalogue include Goods and Services Taxes (GST) and are current at the time of printing. So you can be confident of price stability. At Jaycar, we make every endeavour to maintain prices for the life of the catalogue. However, factors beyond our control (such as changes in foreign currency exchange rates, changes in base material costs etc.) may vary costs and we reserve the right to amend prices accordingly.

STOCK AVAILABILITY At Jaycar we are constantly seeking new products and due to the rapid developments within the electronics industry some products in this catalogue may become obsolete or discontinued during its life. In the event of this happening we apologise for the inconvenience and where possible will substitute a similar product of equal or better quality.

OUR RAINCHECK If your local Jaycar store has sold out of a currently advertised line, we will be happy to issue you with a 'raincheck'. When the stock arrives and you can buy the original item (or its comparable product) at the advertised price - even if the original promotion has ended. 'Rainchecks' do not apply to items that have been advertised as 'limited', 'discontinued', 'surplus' or 'clearance' ranges.

'CHANGE OF MIND' RETURNS Although not obligated to do so, at Jaycar we appreciate that you may have second thoughts about your purchases and will give a 'Change of Mind' refund if goods* are returned within 7 days (14 days for mail order and internet purchases). For 'Change of Mind' purchases, goods can only be accepted back for refund or exchange in 'as sold' condition including undamaged original packaging, complete instruction books, manuals, accessories, etc. If freight expenses of any type have been incurred, these are not refundable. We regret that any cash, credit card, or EFTPOS refunds over $999 must be refunded by Electronics Funds Transfer/Direct Deposit for security reasons. Jaycar does not provide credit notes. Your Sales Docket must accompany all returns.*Note: Refunds on 'Change of Mind' purchases do not apply to books, batteries, headphones, health products, semiconductors, computer software, all recordable media, some tools and non multimeter test equipment (including cathode ray oscilloscopes), step-down transformers (240-100V), some party lighting and associated products.

WARRANTIES Jaycar warranty period is 3 months from date of purchase, or such longer period as stated in this catalogue. Many products carry one year, two year, five year, or lifetime warranty or may qualify for over-the-counter replacement. These items are identified in the catalogue by the icons explained on page A4. If any defect in materials or workmanship in product sold by Jaycar is identified and notified to us within the warranty period then we will, at our discretion repair or replace the product. Jaycar does not accept any liability beyond this for consequential loss. Warranty is subject to us being satisfied that a defect was caused by defective workmanship or materials and was not caused by or was not substantially contributed to by other factors beyond our control, including (but not limited to) defective installation, maintenance, or repair; alterations or modifications of the product in a manner not recommended by the manufacturer; or any neglect, misuse or excessive use. The original Sales Docket or cash receipt must accompany warranty claims to provide starting date of the warranty period.

KIT WARRANTY Most kits are successfully constructed with few problems however, once the kit is under construction all warranty is void, as we cannot guarantee assembler's workmanship or components that have been used.

STATUTORY WARRANTIES Any statutory warranties applicable to your purchase will be honoured by Jaycar in addition to the warranties set out herein. If there is any conflict between any warranty herein contained and a statutory warranty, the terms of the statutory warranty will prevail.

FREIGHT CHARGES RELATING TO WARRANTY ITEMS Warranty repairs or replacement of goods is free of charge however freight charges to and from the service department is required to be paid by the customer.

TRADE If you are professionally engaged in some aspect of the electronics industry on a daily basis, you may qualify for a Jaycar Trade Card. This facility is available in every store including TECHSTORE, to provide you with the opportunity to purchase at special trade prices. Simply call into your local Jaycar store and ask the manager or if you are a TECHSTORE customer email us at techstore@jaycar.com.au. We can provide you with convenient locations, fantastic service and great prices! (Not available for transactions outside Australia and New Zealand.)

REWARDS CLUB For a full list of terms & conditions go to www.jaycar.com.au/member-access

ACCOUNT FACILITIES Jaycar is happy to provide account facilities for the following organisations:

- Schools (Government & non-Government), TAFE, Colleges and Universities
- State & Federal Government Depts, including research facilities
- Hospitals
- Mining companies
- TV & Radio Stations
- ALL public ('LTD') companies

ALL 'Pty Ltd' companies, Sole Traders or Partnerships must complete an account application form. Simply go online to apply https://jaycar.applyeasy.com.au/credit or write to 'Accounts Receivable', PO Box 7172 Silverwater NSW 1811. If you are one of the above you can buy from us on a 30-day (strictly from invoice) account. The invoice will go with the goods or to your accounts payable office (you nominate). Non Payment of monies due will be cause to discontinue supply and to commence recovery procedures.

RECOVERY OF MONIES OWED In the event that Jaycar needs to recover monies owed then the full balance on the account becomes due and payable and all costs of recovering this money will be borne by the debtor.

TECHSTORE - MAIL ORDER & INTERNET PURCHASES For Mail Order & Internet Purchases special conditions apply:

Goods - Aerosols, flammable, heavy and bulky items cannot be sent by post.

Payment - via cheque, money order or credit card (MasterCard, Visa, American Express), & Pay Pal, Humm or Zip Online Only.

Minimum Order Value - Mail order purchases have a minimum order value of $10.

International Orders - Please remember you may have to pay customs and importing charges at your end (if applicable). We cannot supply full customs documentation, but all parcels include required customs dockets. Should you require to return goods for any reason from outside Australia it is essential that customs documentation is included. If customs dockets are not included it can be a costly exercise to have the goods cleared by Customs and the customer must pay this charge. Failure to include customs documentation may result in long delays. Note: Jaycar cannot accept any responsibility or liability for the suitability of any product for use outside Australia, nor its compliance with local regulations.

Freight - Various freight options and rates are given on the order form. After selecting the freight option that suits you, please clearly mark it and add these additional charges to the total on your order. Goods cannot be delivered to a PO box via road or air courier service.

Missing or Damaged Goods - At Jaycar, we've sent out hundreds of thousands of parcels via post over the last 30+ years and the number of items that have been genuinely lost is less than 0.001%. We've found road and air transportation equally as reliable. However it must be emphasised that our responsibility for the goods ceases when the goods are handed over to the nominated carrier. Risk on the goods passes to you when the goods leave our warehouse. Our order form allows you to elect to have goods insured against loss in transit at your cost otherwise loss of goods in transit is at your own risk. All claims for missing and damaged goods in transit must be lodged with the carrier or local Post Office. If goods have been insured please contact Jaycar.

Insurance - If you wish to insure, it will cost $1 for every $100 value or part thereof e.g. If your order is for $145 the insurance will be $2. This insurance covers goods DAMAGED in transit. We do not automatically issue insurance unless you specify. If you don't mention insurance you will NOT be insured.

Out of Stock Items - Are not automatically back ordered. Please re-order once item(s) are in stock.

STORE LOCATIONS AND HOURS Store locations and hours are located on page B292 of this catalogue and were correct at time of print. For new stores and current trading hours visit our website at www.jaycar.com.au/store-finder.

ANY PROBLEMS We are proud of our standing with our Customers and are keen to get any feedback, good or bad, to improve our service, products, stores - or any aspect of our business. So please, do not hesitate to contact us.

JAYCAR AUTHORISED RESELLERS / WHOLESALE ENQUIRIES A listing of Jaycar Resellers in your area can be found on page B290 of this catalogue. For new Resellers visit our website at www.jaycar.com.au/store-finder.

If you operate or want to open a professional electronics retail business and would like to increase your income, we would like to hear from you. Phone 1300 738 555 or email sales@electusdistribution.com.au.
For wholesale enquiries, please refer to our main supplier Electus Distribution (Australia: 1300 738 555 & New Zealand: 0800 235 328).

PRIVACY POLICY Jaycar Pty Ltd (Jaycar) is committed to protecting the privacy of all individuals. To deliver our commitment to privacy, we will comply with the legislation and regulations of the countries in which we operate. This statement provides a succinct overview of how we handle personal information. Our Privacy Policy can be accessed on our website. This was last updated November 2019 https://www.jaycar.com.au/policy.

As an Australian registered company, Jaycar is bound by the current Privacy Act, any amendments and the Australian Privacy Principles (APPs) contained within that Act. All employees and officers of Jaycar are required to comply with the Act and this Privacy Statement. Jaycar has a Privacy Act Procedure which can be obtained by emailing privacyofficer@jaycar.com.au. Information or opinions which are collected, held, used or disclosed by Jaycar about an individual whose identity is apparent, or can reasonably be ascertained, will be protected by the standards outlined in this Statement. To deliver our commitment to privacy, we will:

- Be bound by, and comply with, the APPs under the Act in relation to personal information, communicate this Privacy Statement to all employees and stakeholders to ensure awareness of their requirement to comply with our privacy standards and to anyone else who asks for it
- Ensure lawful, fair and unobtrusive means are used to collect personal information that is necessary for our business purposes
- Collect sensitive information only with the individual's consent and not disclose any personal information to an unrelated third party, except with the individual's consent or where we are required to do so by law
- Take reasonable steps to destroy or de-identify personal information in a secure manner when we have no further need for it or are required to do so by law
- Ensure only authorised personnel who have agreed to keep personal information confidential have access to the information
- Take reasonable steps to keep personal information up to date, accurate and complete
- Provide individuals access to their personal information on request
- Periodically review and revise this Privacy Statement and related procedures to maintain relevance.

Jaycar recognises and respects the importance of each individual's privacy. This Statement and related procedures ensure all personal information held by Jaycar is handled appropriately and kept confidential.

What do we use personal information for? Any personal details you provide will be used for the purpose of dealing with your request, enquiry, transaction or application for employment. This may involve disclosing your personal information to companies within the Jaycar Group, or to service providers who assist us in operating our business. These organisations are required to comply with the principles of this Statement.

Data Security We take steps to protect the personal information we hold against loss, unauthorised access, use, modification or disclosure, and against other misuse. When the personal information that we collect is no longer required, we destroy or delete it in a secure manner, in accordance with our documented procedure.

Your Choices You can access the personal information that we hold about you, and you can ask us to correct the personal information we hold about you. For more information, see our Privacy Policy which is located on our website. If you are listed on one or more of our media or network email lists you can opt out at any time. You can unsubscribe by using the 'unsubscribe' link in our emails.

Our Obligations Jaycar is bound by the information Privacy Principles in the Privacy Act. For more details see our complete Privacy Policy on our website.

How to Contact us For further information contact us on privacyofficer@jaycar.com.au or alternatively you can write to Privacy Officer, Jaycar PO Box 7172 Silverwater NSW 1811, Australia.

LEGAL JURISDICTION Jaycar operates under the laws and regulations of the State of New South Wales. Therefore any legal disputes will be conducted in courts or tribunals situated in New South Wales and under the laws and regulations of New South Wales, Australia.

A
AA0223 A118
AA0225 A118
AA0236 A118
AA0237 A118
AA0262 A119
AA0262 B21
AA0266 A118
AA0266 B87
AA0274 A119
AA0323 A119
AA0346 A119
AA0348 B34
AA0361 B66
AA0364 A119
AA0372 A118
AA0373 A118
AA0374 B235
AA0375 B235
AA0376 A119
AA0376 B235
AA0377 A119
AA0378 A119
AA0380 A76
AA0405 B164
AA0412 B198
AA0414 B160
AA0416 B199
AA0442 B199
AA0472 B158
AA0482 B198
AA0486 B158
AA0519 B158
AA0520 B158
AA0522 B158
AA2007 B137
AA2008 B138
AA2032 B138
AA2036 B137
AA2047 B199
AA2061 B137
AA2080 B138
AA2087 B136
AA2104 B136
AA2112 B136
AA2114 B136
AA2118 B137
AA2126 B138
AA2128 B136
AA2129 B137
AA2133 B138
AA2141 B139
AA2143 B139
AA2147 B139
AA2148 B140
AA2149 B139
AA2150 B140
AA2152 B140
AA2154 B140
AA2156 B140
AA2158 B140
AA2160 B140
AA2170 B137
AA3060 B198
AA3074 B198
AA3075 B157
AA3078 B198
AA3084 B198
AA3086 B198
AB1222 B191
AB1224 B191
AB1229 B191
AB3442 A169
AB3452 A169
AB3456 A169
AB3458 A169
AB3459 A169
AB3462 A169
AB3464 A169
AB3466 A169
AC1400 B159
AC1401 B159
AC1590 B159
AC1591 B160
AC1592 B157
AC1593 B160
AC1594 B159
AC1618 B159
AC1649 B160
AC1650 B159
AC1652 B159
AC1658 B157
AC1671 B143
AC1705 B145
AC1710 B146
AC1711 B145
AC1712 B146
AC1715 B157
AC1716 B157
AC1718 B147
AC1721 B147
AC1722 B147
AC1723 B157
AC1724 B147
AC1726 B143
AC1728 B144
AC1752 B144
AC1753 B144
AC1757 B257
AC1773 B147
AC1785 B143
AC1790 B156
AC5000 B146
AC5002 B146
AC5004 B146
AC5010 B145
AC5012 B144
AC5014 B145
AC5020 B144
AC5030 B147
AF1211 B191
AF1212 B191
AF1214 B191
AF1221 B191
AF1222 B191
AF1223 B191
AF1225 B191
AI5500 B226
AM4010 A136
AM4010 B181
AM4011 B181
AM4012 B182
AM4013 B181
AM4015 B181
AM4041 B183
AM4042 B183
AM4045 B181
AM4049 B183
AM4051 B183
AM4089 B261
AM4092 B181
AM4095 B183
AM4096 B182
AM4099 B182
AM4107 B182
AM4111 B182
AM4113 B182
AM4115 B183
AM4116 B183
AM4117 B183
AM4118 B183
AM4119 B183
AM4127 B182
AM4130 B182
AM4131 B181
AM4132 B183
AM4134 B182
AM4136 B186
AM4137 B186
AM4138 B186
AM4190 B181
AM4192 B181
AM4207 B184
AM4224 B185
AM4225 B185
AM4226 B185
AM4230 B184
AP4006 B142
AP4010 B142
AP4011 B142
AP4012 B142
AR1415 B259
AR1416 B268
AR1418 B177
AR1458 B154
AR1470 B268
AR1480 B268
AR1690 B153
AR1692 B153
AR1721 B154
AR1731 B151
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AR1760 B192
AR1771 B112
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AR1811 B151
AR1812 B151
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AR1828 B151
AR1866 B151
AR1913 B143
AR1916 B143
AR1922 B141
AR1924 B141
AR1930 B130
AR1932 B130
AR1934 B43
AR1936 B43
AR1938 B130
AR1940 B130
AR1948 B153
AR1952 B150
AR1957 B150
AR1963 B150
AR1964 B151
AR1974 B151
AR1975 B150
AR1976 B151
AR1977 B150
AR1978 B150
AR1979 B150
AR1981 B150
AR1987 B150
AR3137 B193
AR3138 B193
AR3139 B192
AR3140 B192
AR3142 B192
AR3144 B192
AR3250 B196
AR3253 B196
AR3260 B196
AR3273 B249
AR3277 B249
AR3286 B249
AR3330 B249
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AR3334 B249
AR3336 B249
AR3338 B249
AR3340 B249
AR3342 B249
AR3344 B249
AS3000 B164
AS3002 B164
AS3004 B164
AS3006 B164
AS3007 B164
AS3008 B164
AS3025 B164
AS3029 B138
AS3034 B164
AS3180 B231
AS3182 B280
AS3185 B280
AS3190 B231
AS3300 B138
AS3305 B138
AU5550 A205
AX3550 B161
AX3560 B161
AX3662 B196
AX3667 B196
AX3668 B163
AX3680 B196
AX3687 B196
AX3689 B196

B
BE1536 B69
BE1537 B29
BE5025 A135
BE5030 A135
BI8200 A135
BI8212 A142
BJ8502 A129
BJ8504 A129
BJ8505 A129
BM2430 A198
BM2440 A185
BM2466 A198
BM2492 B282
BM7106 A196
BM7108 A138
BM7122 A19
BM7132 A139
BM7133 A139
BM7134 A139
BM7135 A139
BM7136 A139
BM7137 A139
BM7142 A139
BM7144 A138
BM7146 A138
BM7160 A90
BM7162 A90
BM7164 A90
BM7166 A111
BM7168 A112
BM7170 A112
BM7200 A65
BT1347 A195
BT1381 A139
BT1382 A139
BT1388 A139

C
CF2752 B163
CF2763 B163
CL2800 B189
CS2310 B197
CS2312 B197
CS2314 B197
CS2316 B197
CS2400 B197
CS2401 B197
CS2402 B197
CS2410 B195
CS2412 B195
CS2451 B161
CS2453 B161
CS2455 B161
CS2469 B134
CS2475 B161
CS2476 B161
CS2477 B161
CS2478 B161
CS2481 B134
CS2485 B134
CS2491 B187
CS2493 B188
CS2494 B187
CS2495 B187
CS2496 B187
CS2497 B187
CS2498 B187
CS2499 B133
CS2566 B187
CS2602 B133
CT1930 B162
CT2007 B162
CW2190 B162
CW2192 B162
CW2194 B162
CW2196 B162
CW2198 B162
CW2199 B162
CW2803 B180
CW2805 B179
CW2811 B178
CW2820 B180
CW2840 B180
CW2841 B180
CW2844 B180
CW2851 B178
CW2853 B178
CW2857 B180
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CW2864 B179
CW2866 B179
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CW2868 B179
CW2869 B179
CW2874 B258
CW2875 B258
CW2879 B180
CW2880 B258
CW2882 B178
CW2883 B179
CW2900 B258
CX2688 B163

D
DC1056 B274
DC1062 B274
DC1068 B274
DC1073 B274
DC1090 B274
DC1091 B274
DC1101 B273
DC1102 B273
DC1103 B273
DC1104 B273
DC1106 B274
DC1108 B274
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DC1111 B274
DC1112 B274
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DC1119 B273
DC1122 B276
DC1125 B276
DC1132 B273
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DC9014 B277
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DC9022 B276
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DC9028 B275
DC9032 B275
DC9034 B275
DC9036 B274
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DC9040 B277
DC9042 B277
DC9043 B279
DC9044 B275
DC9046 B274
DC9047 B274
DC9048 B275
DC9049 B275
DC9050 B275
DC9052 B275
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DC9057 B277
DC9058 B277
DC9059 B277
DC9061 B281
DC9062 B279
DC9063 B275
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DC9065 B278
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DC9067 B278
DC9068 B279
DC9070 B282
DC9072 B282
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DC9076 B278
DC9080 B276
DC9200 B281
DC9202 B281
DC9204 B276

G
GE4049 B155
GE4051 B155
GE4085 B156
GE4089 B128
GE4102 B156
GE4104 B156
GE4107 B155
GE4109 B155
GE4112 B155
GE4137 B155
GG2106 B128
GG2108 A128
GG2340 B116
GG2342 B116
GG2344 B116
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GH1021 B127
GH1031 B127
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GH1402 B115
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GH1560 B11
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GH1608 B11
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GH1950 B116
GH1951 B116
GH1952 B116
GH1953 B116
GH1970 B14
GH1972 B14
GH1974 B14
GH1976 B14
GH2001 B12
GH2003 B12
GH2005 B12
GH2006 B7
GH2007 B12
GH2011 B12
GH2013 B12
GH2014 B4
GH2015 B4
GH2016 B4
GH2017 B12
GH2020 B10
GH2021 B12
GH2022 B10
GH2023 B12
GH2024 B10
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GH2057 B11
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GT3018 B128
GT3019 B128
GT3023 B128
GT3075 B124
GT3231 B124
GT3706 B128
GT3751 A127
GT4074 B122
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GT4084 B122
GT4132 B123
GT4146 B123
GT4147 B123
GT4205 B124
GT4221 B125
GT4223 B125
GT4242 B123
GT4244 B122
GT4246 B121
GT4247 B126
GT4252 B121
GT4257 B125
GT4258 B125
GT4259 B124
GT4260 B126
GT4262 B126
GT4263 B126
GT4265 B126
GT4266 B125
GT4267 B125
GT4268 B124
GT4273 B125
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GT4275 B122
GT4276 B123
GT4280 B121
GT4290 B126
GT4300 B127

H
HB5029 A182
HB5030 A182
HB5031 A182
HB5036 A182
HB5040 A182
HB5041 A182
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HB5064 A182
HB5067 A182
HB5120 B251
HB5125 B251
HB5130 B251
HB5170 B251
HB5171 B251
HB5174 B251
HB5180 B251
HB5182 B251
HB5200 A180
HB5202 A180
HB5204 A180
HB5404 B251
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HB5442 A181
HB5446 A181
HB5450 B251
HB5452 B251
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HB5470 B251
HB5472 B251
HB5556 A181
HB5605 A181
HB5610 A181
HB5910 A178
HB5912 A178
HB5922 A178
HB5970 A178
HB6004 A178
HB6005 A178
HB6006 A180
HB6007 A180
HB6008 A180
HB6009 A180
HB6011 A178
HB6012 A178
HB6013 A178
HB6014 A178
HB6015 A178
HB6016 A178
HB6023 A178
HB6024 A178
HB6025 A178
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HB6128 A179
HB6129 A179
HB6130 A179
HB6132 A179
HB6134 A179
HB6138 A179
HB6172 B65
HB6173 B65
HB6211 A181
HB6212 A181
HB6213 A181
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HB6221 A181
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HB6230 A181
HB6248 A181
HB6249 A181
HB6251 A181
HB6273 A179
HB6294 A182
HB6296 A182
HB6302 A52
HB6304 A51
HB6305 A51
HB6306 A51
HB6308 A51
HB6312 A51
HB6313 A51
HB6317 A52
HB6318 A52
HB6323 A52
HB6330 A52
HB6332 A52
HB6340 A51
HB6341 A51
HB6355 A52
HB6356 A52
HB6359 B80
HB6360 B17
HB6361 A65
HB6381 A177
HB6383 A177
HB6385 A177
HB6387 A177
HB6388 A177
HB6389 A177
HB6404 A177
HB6412 A177
HB6421 A177
HB6423 A177
HB6425 A177
HB6431 A179
HB6432 A179
HB6433 A179
HB6434 A179
HB8100 B19
HB8102 B19
HB8104 B19
HB8106 B19
HB8502 B19
HB8504 B19
HB8520 B19
HC4020 A255
HC4030 B37
HC4034 B37
HC4038 B37
HC4039 B19
HC4040 B37
HC4048 B37
HC4049 B37
HC4064 A255
HC4065 A255
HC4067 B199
HG9955 A48
HG9956 A48
HG9980 A142
HG9985 A141
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HH8502 A170
HH8503 A170
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HH8600 A171
HH8602 A171
HH8607 A171
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HK7009 A216
HK7010 A216
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HK7022 A216
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HK7700 A216
HK7705 A216
HK7707 A216
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HK7711 A216
HK7713 A216
HK7715 A216
HK7717 A216
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ZZ8755 A195
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For next day delivery, or Click and Collect, see page A4

Where it all started...

1984

HUGE RANGE AVAILABLE

Back in '84 you could buy a Z80-based MicroBee computer, and choose from 7 different analog multimeters

1982

NEXTDOOR NEIGHBOURS

York St, Sydney City. Jaycar was never too far away from the local DSE store

THE SPARK

Gary Johnston leaves Dick Smith Electronics & purchases John Carr & Co Pty Ltd

1981

1980s

A new decade

1995

SOPHISTICA-TECH
All stores equipped with POS referred to as "Sophisticated computerised selling stations" at the time

HEADED WEST
First Western Australian store opens in Perth

1991

STRETCHING OUT
Moved into our 15,000ft² (1,400m²) warehouse in Rhodes, NSW

1997

CROSSING THE TASMAN
First store opens in New Zealand, Newmarket Auckland

TOUCH OF COLOUR
Jaycar Catalogue goes full colour

POWER OF THE SUN
Jaycar sponsors the solar model-car competition in conjunction with UNSW